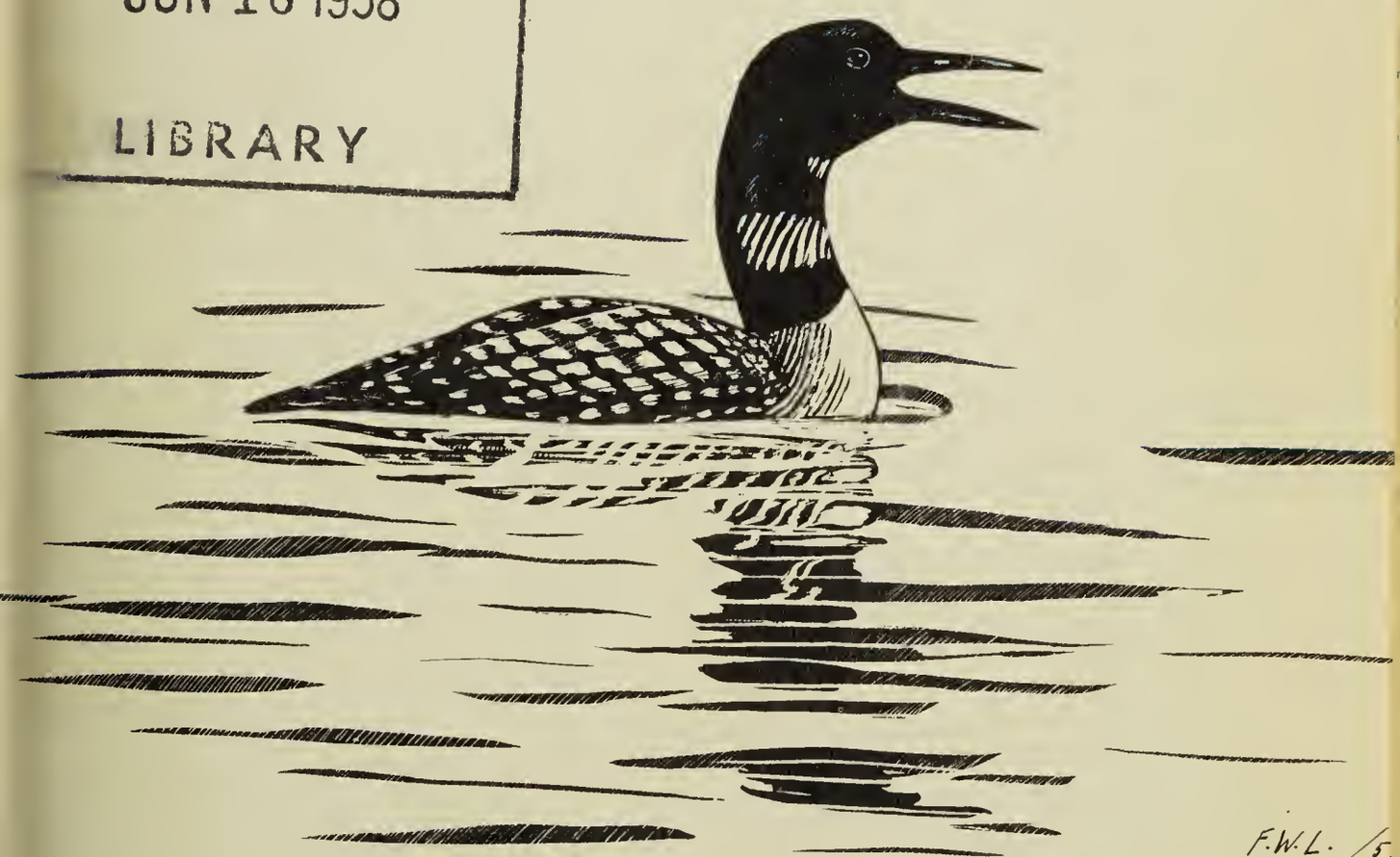
THE Blue Jay

Vol. XVI, No. 2 JUNE, 1958



Common Loon Sketch by F. W. Lahrman

Published quarterly by
THE SASKATCHEWAN NATURAL HISTORY SOCIETY

Membership, including **Blue Jay,** one dollar yearly

BLUE JAY CHATTER

In **Blue Jay** Chatter, June 1957, we had the pleasure of announcing the formation of a Natural History Society in Moose Jaw. Now, one year later, we are able to announce the formation of the Garden River Natural History Society (see page 96). Information about this new society came to us after our March issue had gone to press but our printers kindly consented to include Mr. Sudal's name in the list of local presidents on the inside back cover. We are hoping that we will have the opportunity of meeting some of the people from the Garden River Natural History Society at our annual summer meeting at Emma Lake.

In a provincial society such as ours one of the biggest obstacles to efficient operation is the great distance between the different members and officers of the society. This difficulty is being overcome to some extent this year by holding our meetings in different places. In March we had an executive meeting in Davidson (see page 95). In June we will meet at Emma Lake, and in October we will meet in Saskatoon. Holding our meetings in different parts of the province makes it possible for more people to attend at least some of our meetings, and it also allows a sharing of some of the work and responsibilities of the society. We are grateful to the Prince Albert Natural History Society for the work it is doing in preparing an excellent programme for our June 14 and 15 meeting at Emma Lake. The emphasis during this outdoor meeting is to be on forestry but we will also be hoping to see all the birds recorded in that area by Farley Mowat. We are grateful, too, to our president and the Saskatoon Natural History Society for undertaking the responsibility for the annual meeting which is to be held in Saskatoon on October 18. The Saskatoon executive has requested us to ask for reports for the Annual Meeting of any interesting projects carried on by clubs or individual members during the year.

People who cannot attend these meetings are encouraged to write to the editor so that we may become acquainted with them at least by mail. Until a publication similar to the **Blue Jay** is available in Manitoba and Alberta we welcome the contributions of members from these provinces. We wish that there could be a greater exchange of ideas among the naturalists of the three prairie provinces. A step toward such co-operation will be taken this summer when members from all three provinces participate in the Prairie Nest Records Scheme (page 65). Everyone is urged to use the record cards available from the Saskatchewan Museum of Natural History which has offered to house records for the whole prairie region.

In this issue we are pleased to announce a special publication. This, we hope, will be the first of many such publications sponsored by the Saskatchewan Natural History Society. Harvey Beck has prepared "A Guide to Saskatchewan Mammals" which will be available this summer. Although more than 130 years have elapsed since the publication of Sir John Richardson's **Fauna Boreali-Americana** (Volume one of which includes information on Saskatchewan mammals) no comprehensive provincial list of our mammals has since appeared in print. The Beck bulletin, which deals largely with the identification and distribution of our mammals, is therefore an important contribution, and everyone interested in Saskatchewan natural history will want to have a copy.

Another first for this issue is the appearance of our first paid advertisement (page 77). If you cannot purchase books locally write to the Ontario address given in the advertisement and please mention the **Blue Jay**. Advertisements in keeping with the nature of the **Blue Jay** will be considered for future issues. The editor will be glad to receive inquiries about advertising in the **Blue Jay.**

The Blue Jay

Published quarterly by the Saskatchewan Natural History Society
Founded in 1942 by Isabel M. Priestly

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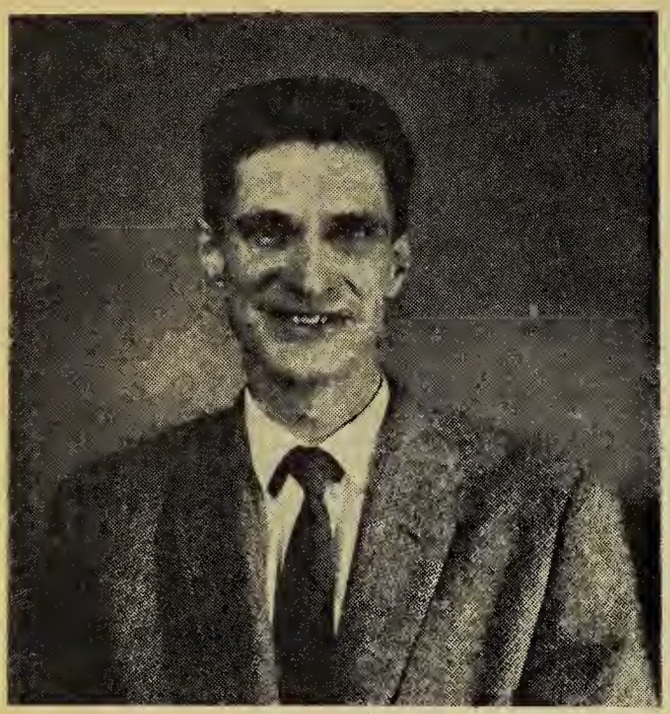
W. H. Beck

by **Norma Beck,** Saskatoon



William Harvey Beck was born in 1927 in Yorkton, Saskatchewan. He evidenced no interest whatever in natural science until the age of two when he became passionately interested in investigating ant hills, bringing home caterpillars as pets, and keeping tadpoles in bottles. Our parents thought it best not to let him have a "killing bottle" to start his insect collection until he was almost five. Thereafter his bedroom was filled with mounted specimens. One of my out-of-town boyfriends was once scared off by Harvey's invitation, "You may stay overnight and sleep in my bedroom if you don't mind bugs."

Mother once made Harvey a butterfly net by attaching a pillowslip to a broom handle, but as he weighed only forty pounds at the time, he found it a trifle unwieldy. On his next birthday, however, he received a real butterfly net, and from then on a familiar sight in Yorkton was a small boy pursuing moths with the rapt expression of Harpo Marx chasing a blonde across the tables.

Harvey was an original member of the Yorkton Natural History Society, and served on its first executive. He went on frequent field trips with the late Mrs. Isabel M. Priestly, and assisted at the birth of the first **Blue Jay** in 1942. It was mimeographed in those days, and we brightened its format by filling in the letters of the stenciled title, "The Blue Jay" with a blue pencil. Harvey owns one of the few complete sets of the **Blue Jay.**

In 1945 Harvey left Yorkton for Saskatoon, where he majored in biology at the University of Saskatchewan. After two years at university he attended the Provincial Normal School at Moose Jaw, and his first school was at Pemmican Portage near Cumberland House. One of his recollections of that eventful year is being presented with a very dead bear by an Indian as a gift. (He and the bear lived amicably together until the spring thaw.)

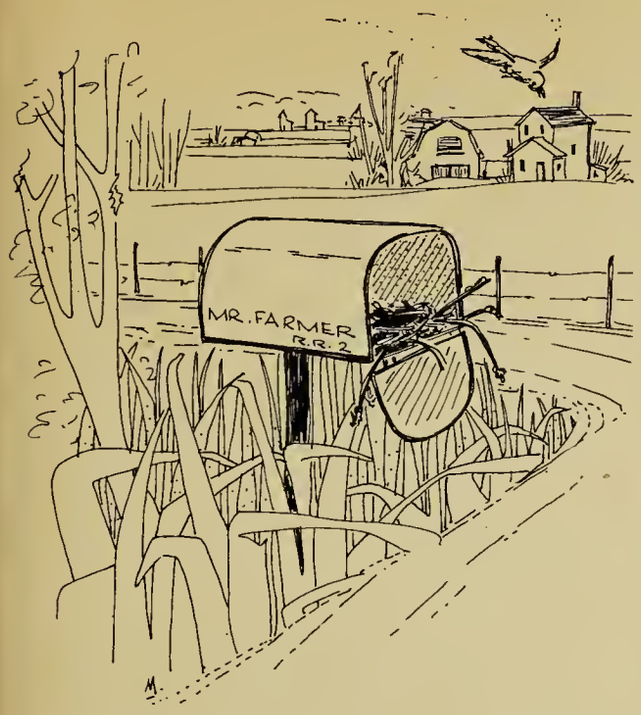
Returning to the University of Saskatchewan, Harvey completed his bachelor of arts degree in 1951. After teaching for a year in a rural school near Spiritwood, Saskatchewan, he became an assistant in biology at the University of Saskatchewan. While cataloguing the University mamal collection, he became aware of the need for a guide to Saskatchwan mammals, and for the past two years has been working towards this end.

MAMMALS OF SASKATCHEWAN

Harvey Beck's bulletin on the mammals of Saskatchewan will be number 1 in the series of special publications on the flora and fauna of Saskatchewan to be published by the Saskatchewan Natural History Society. The **Mammals of Saskatchewan** will be an illustrated booklet listing the species of Saskatchewan mammals, with keys, brief descriptions of characteristics and indications of range. Price of the bulletin will be 50 cents, but a special pre-publication price of 25 cents has been set for any one ordering before July 1, 1958. Order your copy from Elmer Fox, 1053 Gladmer Park, Regina.

Bluebirds and Her Majesty's Mail

by **Mrs. L. Harrison,** Ohaton, Alta.



Every writer is supposed to have a robin story tucked away somewhere to tell in the spring of the year, like the one about the man who never **did** get his house painted. Every spring he got out his paint pots and ladder, climbed up, discovered a robin rearing her young in the eaves, climbed down again, and went fishing. His house remained the community disgrace year after year.

It wasn't the robins that upset **our** schedule. It was a pair of Mountain Bluebirds that interfered with Her Majesty's mail here last summer.

One day I went down to the mail box to leave some letters for the mail man who was due later in the day. There was a pile of dried grasses in the further end, with a little hollow for the bird to lay her eggs in. It looked exactly like the nest of a House Sparrow. Just as I reached in to tear the nest out, something stayed my hand. A male bluebird had been a daily visitor at our bird bath for the last few days. I didn't see his mate and concluded that she had met with an accident. It just could be, though, that she was busy establishing a home somewhere. I watched. Soon a pair of bluebirds flew down to the top of the mail box and entered through the letter slot, from which the flap had long disappeared.

I phoned our postmaster. "What do the postal authorities at Ottawa say about birds building in mail boxes?" I asked him. He laughed. He was also our mail carrier. He said, "Every third mail box on the route has a pair of sparrows in it."

"Ours are bluebirds," I told him.

He hesitated, impressed. "With your permission I can leave your mail in a substitute box until the young are reared," he said.

And so it came to pass. My husband built a tight box with a lid and we set it up beside the one housing the bluebirds.

All went well. Five little pale blue eggs soon graced the nest. Four little fledglings emerged and were duly raised. Daily the parents came to our front yard for their bath. I never heard them sing. Mountain Bluebirds are silent birds. Occasionally when in flight with more of their kind, they will break their silence with a low sweet call.

I saw our postmaster in the fall. He asked me about our bluebirds. "I hardly dared breathe when I left your mail for you last summer," he said.

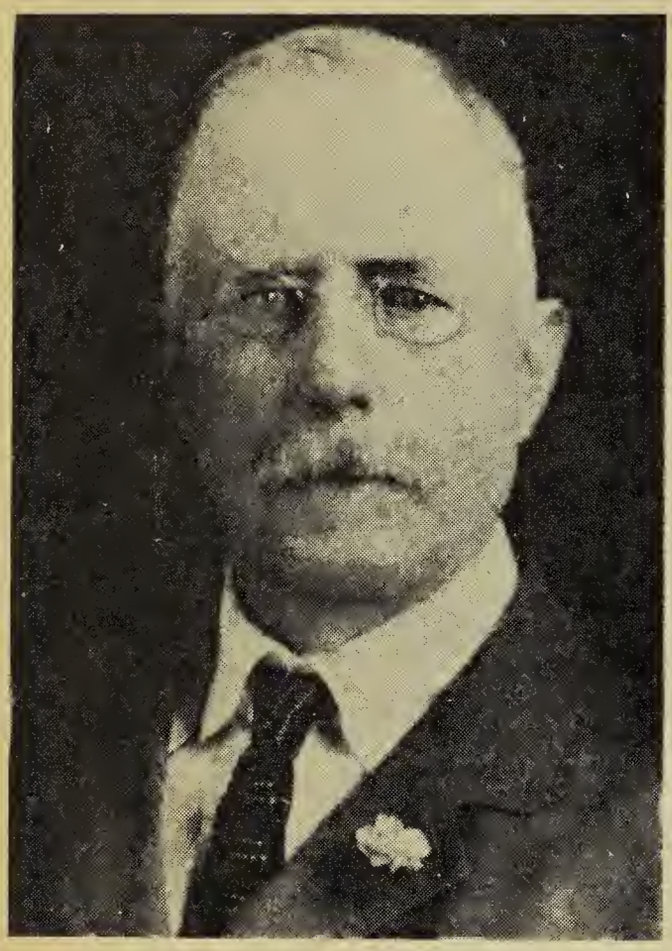
But actually our bluebirds were quite tame. We often looked in upon them, and although the mother bird watched us with anxious eyes, she did not take flight.

We were not fortunate enough to see the young leave their nest and learn to fly. One day when I went down to the corner with some letters, I found them all feathered and swarming all over the interior of the box. Later that same week they were gone. The nest was empty, except for bits of pale blue shells and the one egg which had not hatched. I brought that up to my little daughter who would like to collect eggs, if her heart would let her.

It is reported that bluebirds will always return to the spot where they have had a successful hatch. With this in mind, we have carefully put away our substitute mail box, hoping for just such another emergency next summer.

Saskatchewan's First Resident Bird-Watcher, Geo. F. Guernsey

By **Stuart Houston, M.D.**, Yorkton, Sask.



Sir John Richardson, Thomas Drummond, and Captain Thomas Blakiston all made important studies of Saskatchewan birds, the first two in the 1820's and the latter in the 1850's. However, they were members of exploring expeditions and only temporary visitors. The first **resident** bird-watcher of whom we have record was George F. Guernsey.

Guernsey's bird records were used in the **Birds of Western Manitoba** by Ernest E. T. Seton, publishd in **The Auk** in April and June of 1886. Seton in his introduction said, "The observations for the region are my own, as I have visited nearly every part of it. I have, however, received much valuable assistance from Mr. G. F. Guernsey, who is responsible for the records from Qu'Appelle." In 1891, the Smithsonian Institute published a revised and enlarged work entitled **The Birds of Manitoba**, by Ernest E. Thompson (Seton's alternate name). This gave Guernsey's observations more fully with 96 species listed from Fort Qu'Appelle, with spring migration dates given for most of these. When one considers that books on birds for the amateu were virtually non-existent, and tha identification was made at that tim largely from collected specimens, thi number of sight records is ver creditable indeed. Ninety-three o the 96 are acceptable to this write only three being open to seriou question (Greater Scaup, Field Spar row, Swamp Sparrow). Some of th Fort Qu'Appelle migration dates wer for 1885; it is not clear whether th majority were from 1884, and only few addenda from 1885, or whethe all were from 1885.

Here is Guernsey's list of 96 spec ies observed at Fort Qu'Appelle, wit indications of their status in th area, and first arrival dates:

Common Loon: Common summe resident; breeds; arrival April 2
White Pelican: Common summer resi dent; very plentiful on lakes in 188 Toward migratory season I saw flock of upwards to 500 birds (letter Ma 18, 1885).
Double-crested Cormorant: Rathe common summer resident; breeds arrival about April 25.
Great Blue Heron: Tolerably commo summer resident; breeds; arrive May 6.
American Bittern: Common summe resident; breeds; arrives May 21.
Canada Goose: Common summer resi dent; breeds; April 1 to 10.
Snow Goose: Transient; passing ove May 3 to 28.
Mallard: Common summer residen breeds; April 5 to 15.
Gadwall: Common summer residen breeds; April 20.
American Widgeon: Common summe resident; breeds; April 20.
Pintail: Common summer residen breeds; April 5 to 15
Shoveler: Common summer residen breeds; May 1.
Wood Duck: I know of one bein shot here in 5 years.
Green-winged Teal: Common summe resident; breeds; April 5 to 15.
Blue-winged Teal: Common summe resident; breeds; May 10.
Redhead: Common summer residen breeds; April 23.

Ring-necked Duck: Common summer resident; breeds; arrives April 20.
Canvasback: Common migrant; April 23.
Greater Scaup: Common summer resident; breeds; arrives April 20 in flocks with Lesser Scaup and Ring-necked.
Lesser Scaup: Common summer resident; breeds; arrives April 20.
Common Goldeneye: Tolerably common summer resident; breeds; arrives April 15.
Bufflehead: Common summer resident; breeds; arrives Sept. 20.
Ruddy Duck: Common summer resident; breeds; May 1.
White-winged Scoter: Common migrant; May 1.
Surf Scoter: Rare migrant; May 1; Specimen taken in fall of 1883.
Hooded Merganser: Common summer resident; breeds; arrives April 20.
Common Merganser: Tolerably common summer resident; May 5.
Red-breasted Merganser: Tolerably common summer resident; May 1.
Turkey Vulture: Common summer resident; breeds; arrives May 20.
Bald Eagle: Occasional; does not breed; April 30.
Marsh Hawk: Comon summer resident; breeds; arrives April 15.
Osprey: Occasional summer resident.
Pigeon Hawk: Tolerably common; arrives April 20.
Sparrow Hawk: Common summer resident; breeds; arrives April 15.
Ruffed Grouse: Common; permanent resident; breeds.
Sharp-tailed Grouse: Common; permanent resident; breeds.
Whooping Crane: Transient; passing over April 28 to May 1.
Sandhill Crane: Transient; passing over April 28 to May 1.
American Coot: Common summer resident; breeds; arrives May 6.
Killdeer: Common summer resident; breeds; arrives April 17.
American Golden Plover: Tolerably common migrant; May 20.
Upland Plover: Common summer resident; breeds; arrives May 12.
Common Snipe: Common summer resident; breeds; arrives April 20.
Greater Yellowlegs: Common migrant; May 5.
Lesser Yellowlegs: Common migrant; May 5.
Marbled Godwit: Common summer resident; breeds; arrives May 10.
American Avocet: Occasional; plentiful on alkali ponds to the west.
Black Tern: Common summer resident; breeds; arrives May 18.
Mourning Dove: Common summer resident; breeds; arrives May 12.
Passenger Pigeon: Occasional; May 10.
Black-billed Cuckoo: (noted)
Great Horned Owl: Occasional; not common.
Snowy Owl: Have seen specimens but not common.
Whip-poor-will: Occasional.
Common Nighthawk: Common summer resident; breeds; arrives May 21.
Ruby-throated Hummingbird: Occasional; not plentiful.
Belted Kingfisher: Tolerably common summer resident; breeds.
Yellow-shafted Flicker: Common; summer resident; arrives April 25.
Hairy Woodpecker: Tolerably common; permanent resident.
Eastern Kingbird: Common summer resident; breeds; arrives May 24.
Eastern Phoebe: Tolerably common summer resident; arrives May 20.
Horned Lark: Common summer resident; arrives April 1 to 25.
Tree Swallow: Summer resident; breeds; arrives about May 10.
Bank Swallow: Summer resident; breeds; arrives about May 10.
Barn Swallow: Summer resident; breeds; arrives about May 20.
Cliff Swallow: Summer resident; breeds; arrives about May 10.
Blue Jay: Tolerably common summer resident; arrives May 6.
Black-billed Magpie: Occasional; plentiful 100 miles north.
Common Raven: Occasional.
Common Crow: Common; breeds; April 1 to 5.
Black-capped Chickadee: Common permanent resident; breeds.
House Wren: Common summer resident; breeds; arrives May 12.
Short-billed Marsh Wren: Common summer resident; breeds; arrives May 15.
Catbird: Common summer resident; breeds; arrives about May 15.
Robin: Common summer resident; flocks of 4 to 5 about April 12.
Veery: Tolerably common summer resident; arrives about May 20.
Cedar Waxwing: Common; arrives May 22.
Loggerhead Shrike: Common; breeds.
Yellow Warbler: Common summer resident.
Bobolink: Tolerably common summer resident; breeds; arrives May 15.

Western Meadowlark: Common summer resident; breeds; arrives April 5.
Yellow-headed Blackbird: Common summer resident; breeds; arrives April 18.
Redwinged Blackbird: Common summer resident; breeds; arrives April 18.
Baltimore Oriole: Common summer resident; breeds; arrives May 18.
Common Grackle: Common summer resident; breeds; arrives April 25.
Brown-headed Cowbird: Common summer resident; breeds; arrives April 20.
Scarlet Tanager: Occurs sometimes but is rather rare.
Evening Grosbeak: Common winter visitor; large flocks seen in Feb. and March.
Pine Grosbeak: Common winter visitor; large flocks seen all winter.
Common Redpoll: Common; arrives April 1.
American Goldfinch: Tolerably common; summer resident; breeds; arrives May 24.
Chipping Sparrow: Summer resident; breeds; arrives April 13.
Field Sparrow: Common summer resident; breeds; arrives April 15.
Swamp Sparrow: Common summer resident; breeds; arrives September 18.
Song Sparrow: Common summer resident; breeds; arrives April 1 to 5.
Snow Bunting: Common winter visitor; leaves about May 10.

George Forbes Guernsey was born Nov. 6, 1861, in Aldershot, England, the eldest son of Major Forbes William Guernsey of the 45th First Nottinghamshire Regiment — Sherwood Foresters. He spent some time in India as a boy, and lived in Dublin and London until his father retired from the Army and brought his family to Port Hope, Ont. in 1871. Young George was articled to a lawyer in Port Hope, but before finishing his law course he came west and joined the Royal North West Mounted Police at Fort Walsh on Aug. 21, 1880. He was a member of "B" Division and served chiefly at Fort Qu'Appelle. He was part of the escort for the Marquis of Lorne when he visited the "Wild West." He received the North West Rebellion medal, and had three sketches illustrating Riel Rebellion activity published in the Illustrated War News of Toronto on May 9, 1885. He took his discharge from the R.N.W.M.P. on Dec. 12, 1886, but was immediately re-engaged as a Special Constable until June 21, 1887. We are told that it was because of the good duck-hunting and fishing that he remained to settle at Fort Qu'Appelle (then in Assiniboia, N.W.T.). He was a magistrate, notary public and insurance agent. E. M. Miller, Q.C. of Regina reports that when he worked for Guernsey in the early 1900's, Guernsey was an auctioneer and general agent, and was the Dominion election agent, keeping a voters' list and registering all vital statistics. His home was about a mile from town, along what is now the road to the San. He married Charlotte Morrison and they had four children: George Forbes Jr., Eva, Laura (who died in infancy) and Elizabeth. I am indebted to Miss Eva Guernsey, of Vancouver, for most of the information given in this article.

Mrs. Guernsey died in 1903, and Mr. Guernsey later married Winnifred Morgan. They had two sons Charles and Terrence, born in Penticton where the family moved about 1907. In Penticton, Guernsey was a prominent citizen, serving as magistrate, president of the Conservative Association and recruiting officer in the first world war.

George Guernsey was always interested in wild life of every kind. At Fort Qu'Appelle his children had a succession of pet crows and ever a Sandhill Crane which would follow Mrs. Guernsey around like a dog. His son had a collection of birds' eggs. At Penticton, he kept Mallards on the pond near his home, and these attracted many other ducks. He often went on the "speeder" with work crews on the Kettle Valley Railroad to fish in mountain lakes. He was instrumental in releasing pheasants in the Penticton area. He also had a small orchard of choice fruit trees and was fond of gardening.

For years, Guernsey wrote articles for **Rod and Gun** and for the Mounted Police annual **Scarlet and Gold** under the name of "Waseecha Hoska." This was Indian for "long white man," the name the Indians had given him on the prairies (he stood six feet tall in his sock feet).

He retired in 1935 and died April 6, 1937, in Penticton at the age of 75. At his funeral, he was accorded full military honors, including a firing party.

Longspurs in Saskatchewan

Sketch by F. W. Lahrman

CHESTNUT-COLLARED LONGSPUR

Observations of Longspurs at Bladworth

by **P. L. Beckie**, Bladworth, Sask.

We have in Canada four members of the sparrow family that form an interesting group and are not too well known. It isn't because of their scarcity that they are unfamiliar, but because of their drab coloration, their unassuming manner, and, probably most of all, because they nest in areas visited only occasionally by man. These are the longspurs, so named because of an unusually long hind claw.

Here in our area the Chestnut-collared Longspur comes to nest. The Lapland and the Smith's pass through on their way to the Arctic tundras. The Lapland is often seen in immense flocks, which are nearly invisible when they stop to feed on summer-fallow fields. The McCown's nest on the dry prairies, but as yet I have not found a pair nesting in this area.

Before all of winter's snow has left us these harbingers of spring joyfully wing their way north. The longspur's flight is undulating, and it is cheered by the continuous tinkling of calls. Early in April waves of these birds begin crossing our prairies. Dates of arrival that I have for the Lapland are April 7, 1949; April 15, 1950; April 14, 1952; March 31, 1953; April 4, 1954; April 1, 1955; April 15, 1956; April 5, 1957. Some last seen dates are Oct. 8, 1950; Oct. 18, 1953; Oct 8, 1954. The amount of weed seeds destroyed by the great numbers of longspurs during this comparatively long season must make this family beneficial to agriculture.

The Chestnut-collared Longspur, so named because of its actual coloration, is the longspur I am most familiar with. This is a typical bird of the treeless prairies. Its song seems to impart even more loneliness, if that could be so, to the surroundings it inhabits. The song may be given from the top of a weed, or in a more dramatic manner in the air by the courting male. One of early spring's most pleasant sounds or sights is the aerial song of the male Chestnut-collared Longspur. With bubbling enthusiasm, the male rises in flight, attaining a height of about 30 feet; then with wings held in a V above his back, he lets flow his love song as he drops to earth.

Some first seen dates for the Chestnut-collared are April 22, 1950; April 29, 1955; April 29, 1957. This member of the longspurs seems to be holding its own, being still present in good numbers considering the menace of trampling livestock, and prairie lands being put under cultivation.

Although I often see the McCown's in migration, it does not pass through here in numbers anywhere near com-

parable to the Lapland, and I have no records of resident birds for this area. I have seen McCown's on April 7, 1947, April 16, 1948, May 1, 1955.

I believe that the Smith's is only a rare migrant here, but may be more plentiful than I know, because of the difficulty in identifying flying migrating birds.

Note: To my amazement, the day I wrote this, yesterday March 28, I thought I heard flocks of longspurs passing over. I didn't believe my ears. Today I heard another flock pass over, and the birds weren't Snow Buntings. So that's an early date for me—March 28 and 29, 1958.

EDITOR'S NOTE: Since Lawrence Beckie was surprised to record Lapland Longspur flights on March 28 this year, we think that he would be interested in some observations of Boswell Belcher at Dilke. He distinguishes between his first spring observations of one or more individual birds, usually noted on the ground early in the season (e.g. March 15, 1953. March 9, 1954), and the large flocks seen later. His dates for the first mass flights observed are April 10, 1954, April 1, 1955, April 12, 1956, April 4, 1957. March 28, 1958. In am interested in the early records of individual birds because we noted one stray Lapland Longspur on February 12 this year (apparently with Horned Larks) in a field just north of Regina. It appears that some Lapland Longspurs remain in southwestern Saskatchewan all winter. The Saskatchewan Museum of Natural History has on record a statement made by C. F. Holmes of Dollard (March 9, 1937) to the effect that Lapland Longspurs are seen about all winter. This seems to be borne out by the remarks of S. A. Mann at Skull Creek who told us this spring that he has the impression that Lapland Longspurs may be seen in that area in every month of the year, with the exception possibly of December. "I think," Mr. Mann adds, "that would also go for Smith's Longspurs as well, for they nearly always appeared to feed together."

Resident Longspurs in Lucky Lake Area

by **Frank Roy**, Saskatoon

What has happend to our resident longspurs? The Chestnut-collared Longspur was an abundant bird in the Lucky Lake-Birsay region from the year 1937 to 1944. As many as 15 pairs used to nest in a fifty-acre pasture on our farm. By 1945, not more than seven or eight pairs nested in the same area. In 1946 five pairs remained. In 1947, not a single bird nested in the pasture (which, by the way, had been reduced to 20 acres in extent). Since that date, the Chestnut-collared Longspur has become progressively more scarce, even in the extensive tracts of pasture west and south of Lucky Lake and Beechy.

Last summer I did not record a single longspur on the trip from Saskatoon to Cypress Hills Provincial Park, June 14-16, even though we passed through miles of suitable prairie habitat. The Chestnut-collared Longspur was not recorded by any member of the Natural History Society in the course of our summer meeting, although, W. Earl Godfrey (1950. Birds of the Cypress Hills and Flotten Lake Regions, Saskatchewan. Bulletin No. 120. Nat Mus. of Can.) termed it "abundant on the plains surrounding the Cypress Hills," in June, 1948. Godfrey, it must be noted, did not see the bird in the higher hills, but members' observations were taken from the town of Maple Creek south to the Park. Taverner, in 1921 recorded the bird as "very common" on the prairie south of Cypress Lake; we failed to uncover a single bird in the same area.

The McCown's Longspur was never a common bird in the Birsay- Lucky Lake area. It seemed to frequent cultivated fields more than its chestnut-collared cousin, and it was inclined to be colonial. In the area south and west of Beechy, much of which is grazing land, the McCown's was quite common as recently as 1948. In the Matador Ranch country it outnumbered the Chestnut-collared Longspur; eight to ten singing males could be noted on a mile's walk across the prairie.

In recent years, the McCown's Longspur seems to have suffered a fate similar to that of the Chestnut-collared. On a trip through the Matador country, August 5, 1955, only one bird was noted. Admittedly, longspurs nest early and have already begun to flock by the first of August. Again, last June, while travelling on Number 4 Highway from Rosetown to Swift Current, a careful check of suitable habitat north and

west of the Beechy region where they were once common, revealed not a single longspur.

Cultivation has made inroads upon prairie bird populations. The decline in numbers of the Long-billed Curlew and the Upland Plover is at least partially due to intensive farming within much of their range. Has cultivation brought about this rather sudden decline in the longspur population? Do newer methods of cultivation, and more frequent tilling to eradicate weeds, make it impossible for longspurs to rear their young in regions where they were abundant as recently as fifteen years ago? Perhaps the Beechy-Lucky Lake-Birsay area is near the northern limit of the longspur range, and therefore subject to marked fluctuation in numbers.

I would like to have reports from other members, particularly those who have kept records for a number of years. Perhaps my generalization about a decline in numbers is unwarranted. Further field studies in the Lucky Lake region this spring will help bring the information up to date. Meanwhile, let us hope that the decrease in longspurs is a local phenomenon rather than the province-wide decline that I suspect.

The Blue Goose in Saskatchewan

by **Fred W. Lahrman**, Saskatchewan Museum of Natural History

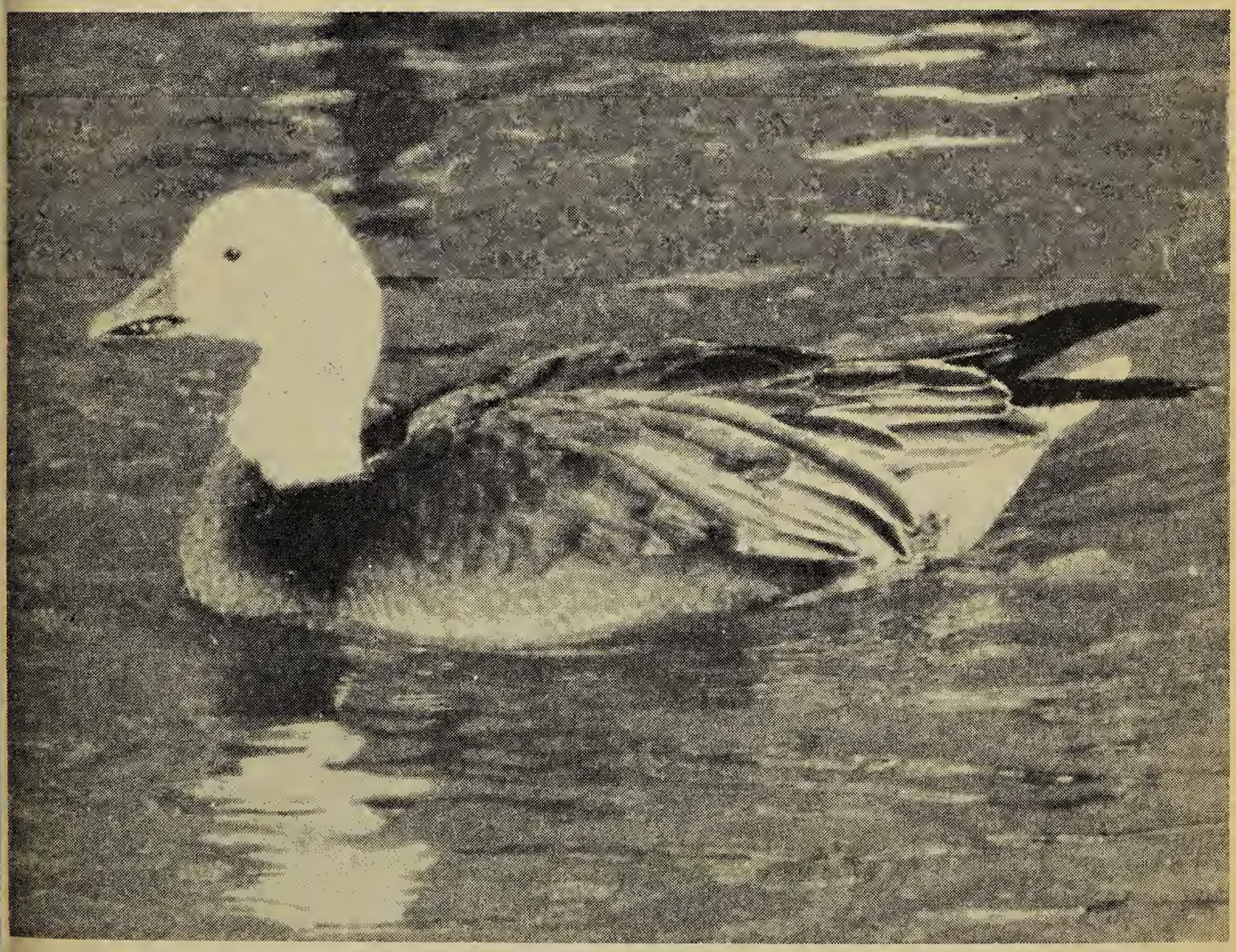


Photo by F. W. Lahrman

During recent years the Regina area has been favored with a spectacular invasion of the Blue Goose (*Chen caerulescens*) which stops to rest and feed here for a few weeks in spring during the northern migration to the barren lands of northern Hudson Bay and Baffin Island.

These geese are almost always seen in company with the Snow Goose (*Chen hyperborea*) and often the "Snows" and "Blues" are joined by White-fronted (*Anser albifrons*) and Canada Geese (*Branta canadensis*).

To my knowledge, prior to 1953 the Blue Goose was a rare visitor to our province, its usual spring migration route being through Manitoba. I saw my first Blue Goose on May 4, 1948, when four were observed migrating northward with a flock of Snows. On September 23, 1949, another one was seen on the north end of Last Mountain Lake, northeast of Imperial, with a small flock of Snows and White-fronts.

The spring of 1953 showed a sudden increase in the number of Blues as on April 23 and 24 approximately 700 were observed in the company of thousands of Snows. The peak year of abundance for geese in this area was during the spring of 1954 when approximately 20,000 geese were observed resting in the Kronau area. This included a majority of Blues and Snows. On May 10, 1954, approximately 1,000 Blues and Snows were still seen in this area but by the 12th they had all left. During this spring large numbers of geese (probably the same flock) had also appeared at Duval and the north end of Last Mountain Lake.

Since 1954 the Blue Goose has dwindled in numbers in Saskatchewan. During the spring of 1955 I noted only about 3,000 Blues and Snows, marking a sudden decrease in their number since the peak year of 1954. During the spring of 1956 there were approximately 1,000 of these geese and during each of the springs of 1957 and 1958 there hav been about 2,000. These figures, course, only give a picture of gener trends for one observer on occasion trips cannot hope to give this ar complete coverage.

The areas which were particular favored by the geese included Fra cis, Kornau, Richardson, Edenwo Corinne, Gray, Rowatt, Duval a the north end of Last Mountain Lak north of Imperial and Govan. He on the flat "Regina Plains," lar areas of cultivated farm lanc b came flooded. This provided ide feeding and resting areas for wate fowl.

During the fall the goose migrati in this area is generally very poo the Blue Goose is very rarely, if ev seen.

One specimen of the Blue Goose juvenile) was received at the Muse on Oct. 11, 1955, from Mr. Ralph K man from Regina. The bird w found wounded approximately miles east of Regina on Wasca Creek.

The museum's first specimens we received from Dr. J. R. Hoag Regina; he had collected them kno ing them to be "firsts." These we taken April 27, 1931, at Rock La 12 miles northwest of Stought Saskatchewan. A flock and o wounded bird were seen by Mr. G. Bard and M. F. Bradshaw, shor afterward at Rock Lake.

Photo by F. W. Lahrma

ONE WHITE-FRONTED AND TWO CANADA GEESE

A Report on Spring Migration in the Regina Area, 1958

by **Fred W. Lahrman**, Saskatchewan Museum of Natural History

Members of the Museum staff and of the Bird Group in the Regina Natural History Society co-operated this year in a special study of the spring migration in the Regina area. Each individual reported his observations to the Museum where I kept a record of early arrival dates. This list is particularly interesting because it represents the joint findings of a number of enthusiastic birders. The list includes records submitted to April 30. This year special interest has been shown in the Regina area because Regina birders want to become more familiar with local conditions in view of the A.O.U. Meeting to be held here in August, 1959. We expect that this renewed interest in our local area will stimulate "birding" activities throughout the summer—both this year and next.

Early Arrival Dates, Spring 1958

Date	Species
April 18	Horned Grebe (3)
April 19	Pied-billed Grebe (1)
April 20	White Pelican (flocks)
April 21	Double-crested Cormorant (1)
April 2	Great Blue Heron (1)
April 25	Common Egret (1)
March 29	Whistling Swan (5)
March 30	Canada Goose (32)
April 6	White-fronted Goose (flock)
April 8	Snow Goose (75+)
April 8	Blue Goose (75+)
April 9	Gadwall (2)
March 25	Pintail (12)
April 1	Green-winged Teal (1)
April 18	Blue-winged Teal (2)
March 30	American Widgeon (2)
March 26	Shoveler (4)
April 8	Redhead (5)
April 8	Ring-necked Duck (1)
April 1	Canvasback (5)
April 1	Lesser Scaup (8)
March 25	Common Goldeneye (3)
April 21	Bufflehead (1)
April 25	Ruddy Duck (3)
March 31	Common Merganser (4)
April 5	Red-breasted Merganser (1)
April 22	Turkey Vulture (1)
April 19	Cooper's Hawk (1)
March 30	Red-tailed Hawk (9)
April 17	Swainson's Hawk (1)
March 29	Rough-legged Hawk
March 29	Marsh Hawk (1)
April 22	Peregrine Falcon (2)
April 8	Sparrow Hawk (1)
April 15	Sandhill Crane (4 flocks)
April 13	American Coot (1)
March 30	Killdeer (1)
April 25	American Golden Plover (flock)
April 11	Common Snipe (2)
April 20	Willet (1)
April 10	Greater Yellowlegs
April 8	Lesser Yellowlegs
April 26	Pectoral Sandpiper
April 25	Baird's Sandpiper (19)
April 26	Marbled Godwit
April 26	Sanderling (1)
April 23	American Avocet (2)
April 27	California Gull (1)
March 26	Ring-billed Gull (1)
April 12	Franklin's Gull (1)
April 26	Bonaparte's Gull (1)
April 12	Mourning Dove (1)
April 19	Burrowing Owl (1)
April 8	Belted Kingfisher (1)
April 10	Yellow-shafted Flicker (1)
April 9	Red-shafted Flicker (1)
April 21	Eastern Phoebe (1)
April 20	Say's Phoebe (1)
Feb. 15	Horned Lark (several)
April 12	Barn Swallow (1)
April 29	Purple Martin (1)
March 23	Common Crow (2)
April 8	Brown Creeper (3)
March 27	Robin (1)
April 23	Hermit Thrush (2)
April 15	Townsend's Solitaire (1)
April 8	Golden-crowned Kinglet (3)
April 9	Ruby-crowned Kinglet (1)
April 26	Water Pipit (several)
April 19	Myrtle Warbler (1)
March 28	Western Meadowlark (1)
April 25	Yellow-headed Blackbird (1)
March 30	Red-winged Blackbird (3)
April 26	Rusty Blackbird (2)
April 11	Brewer's Blackbird (1)
April 10	Common Grackle (1)
April 8	Purple Finch (1)
April 16	Savannah Sparrow (1)
April 21	Vesper Sparrow (1)
March 26	Slate-colored Junco (1)
April 1	Oregon Junco (1)
March 13	Tree Sparrow (1)
April 8	Fox Sparrow (1)
April 8	Song Sparrow (1)
April 19	McCown's Longspur (flocks)
Feb. 12	Lapland Longspur (1)
April 20	Smith's Longspur (4)
April 17	Chestnut-collared Longspur (n)

Botulism at Old Wives Lake

by **Fred G. Bard**, Saskatchewan Museum of Natural History

Photo by Bard

ARLENE AND LORENE BARD WITH A SICK DUCK

The island on Old Wives Lake was visited on August 17, 1957, for the purpose of picking up the zoology field camp where Dr. R. W. Nero and Fred Lahrman carried out behavioural studies of the Western Grebe. The pelican young were about ready to fly and four were taken for the Calgary Zoo.

While travelling to the island we observed ducks diving to escape the boat. They appeared to swim and dive with difficulty. As I watched them I thought of the possibility of their having botulism. We landed in the south bay of the "Isle of Bays." Here several ducks were found dead and dying on the shore. These showed the usual symptoms of botulism, green around the vent and paralysis.

To make a survey I walked a quarter of a mile along the beach each way from our landing point. The following dead birds were found in this area: Mallard, 19; Pintail, 22; American Widgeon, 1; Double-crested Cormoran, 1; Ring-billed Gull, 3; total 46. All are believed to have died from botulism. No attempt was made to search the vegetation for other birds which probably would have sought shelter when about to die.

GREAT HORNED OWL TRAVELS 450 MILES

A Great Horned Owl, banded as a nestling on May 24, 1956, near Yorkton by Dr. Stuart Houston, was found injured and blind in one eye at Bluffton Minnesota on Dec. 17, 1957, by Gary Schwartz, who reported that it died two days later. This owl had wandered some 450 air-line miles, which is more than is usually expected for a non-migratory species.

Photo by F. W. Lohrman

WHISTLING SWAN IN SPRING MIGRATION, 1958

Protection for Birds of Prey Urged

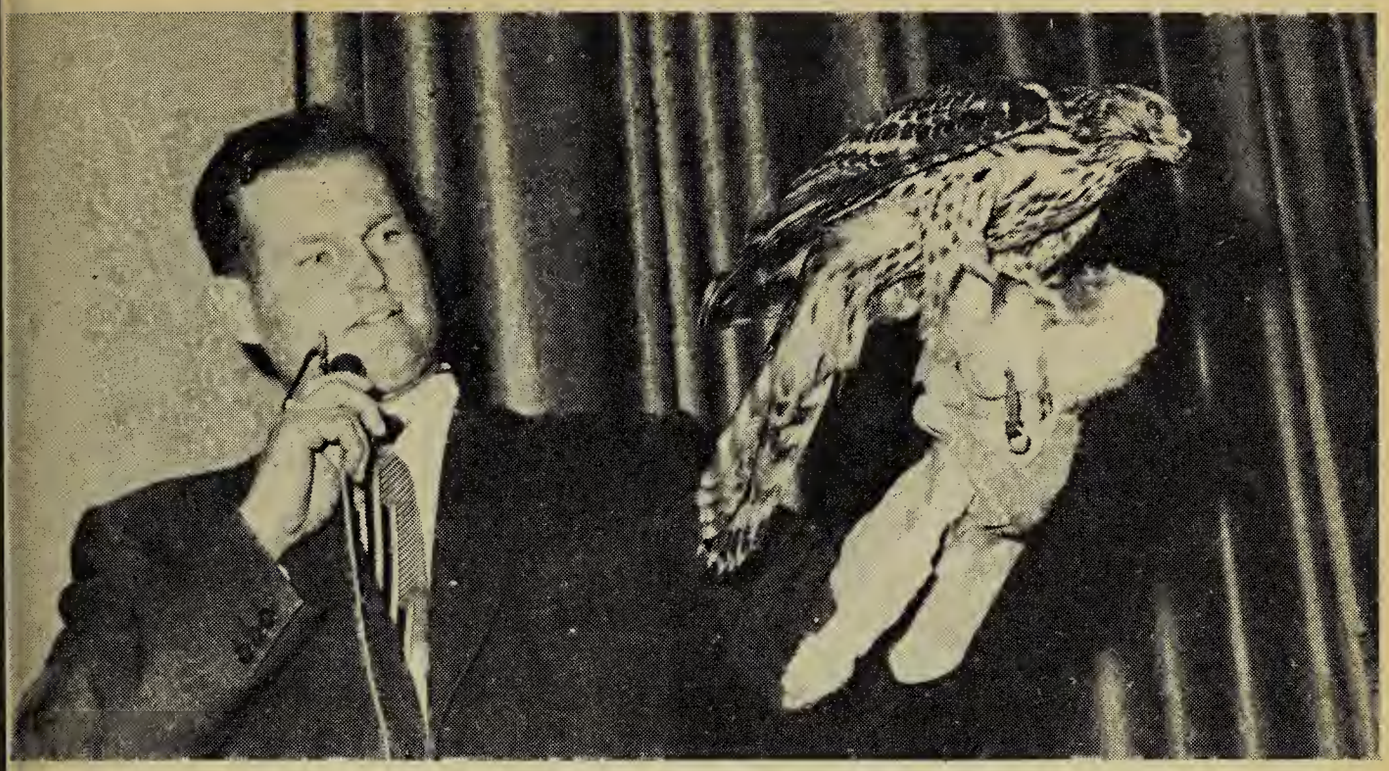


Photo by R. W. Fyfe

AL OEMING WITH GOSHAWK AT REGINA MEETING, MARCH 20, 1958

An especially interesting meeting of the Regina Natural History Society on March 20, 1958, brought together two Canadian naturalists who are actively concerned about protection for birds of prey—Al Oeming, President of the Edmonton Zoological Society, and John A. Livingston, Executive Director of the Audubon Society of Canada, who came from Toronto for the meeting. A large audience heard the special talk given by Al Oeming on the value of birds of prey and the necessity for protecting them by legislation. Support was given the guest speaker's plea for protection for birds of prey by John A. Livingston who spoke for the Audubon Society of Canada and reviewed the progress that has already been made in Canada toward achieving such protective legislation. Both Mr. Oeming and Mr. Livingston urged that Saskatchewan revise its present laws in order to give protection to its birds of prey which are particularly vulnerable on the open plains. The meeting then passed a motion that the society urge such protective legislation and that the president name a committee to study the question and prepare a resolution for presentation to the government. This committee was empowered to contact other clubs in Saskatchewan, including such groups as natural history societies and fish and game leagues.

Because we know that **Blue Jay** readers are interested in questions of conservation, we are summarizing the arguments advanced in support of protection of the birds of prey by Al Oeming and John Livingston.

In addition to explaining the role of the birds of prey, Mr. Oeming told of study and conservation projects in which he himself has been active, such as his province-wide canvass of information on the Great Gray Owl and his study of the habits and movements of the Snowy Owl. He dwelt on the magnificent physical attributes of the birds of prey, as well as their function in the natural order. "When you kill one of these beautiful birds," he said, "you suffer two losses—a spiritual one and an economical one."

In a country as large as ours, Mr. Oeming pointed out, there is certainly room for all forms of wildlife. "We are living in an age that is growing increasingly complex, and we actually hunger for closer associations with nature. If we deal with these problems intelligently and objectively, we can have our agricultural areas, we can continue to expand our industrial developments, and at the same time we will be able to perpetuate and enjoy a healthy and fully representative wildlife population."

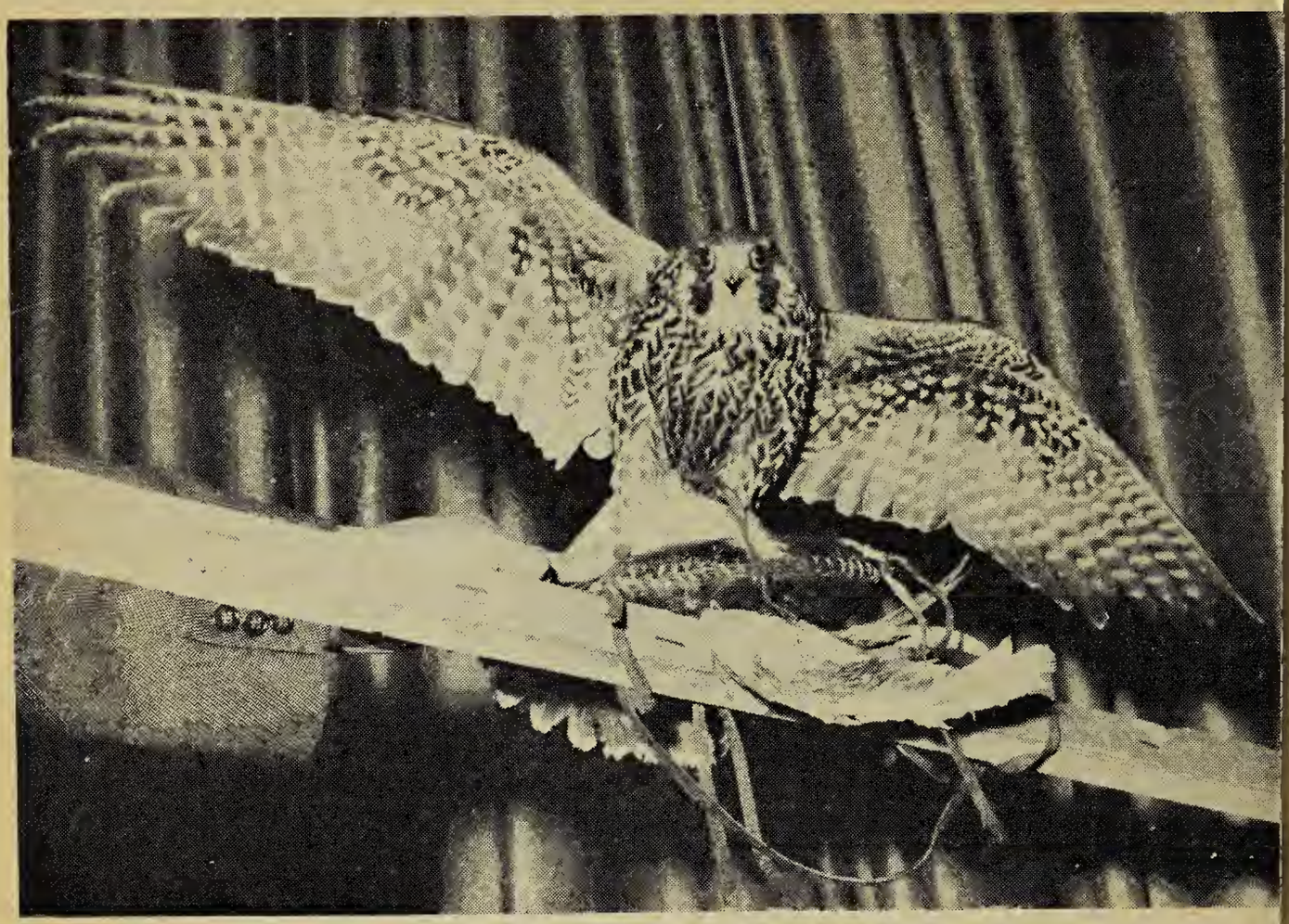


Photo by R. W. Fyfe

PEREGRINE FALCON BROUGHT TO REGINA MEETING BY AL OEMING

In an open letter to the editor of the **Blue Jay**, John A. Livingston defined the position of the Audubon Society of Canada in regard to the question of securing legal protection for birds of prey. In several provinces in Canada, the Audubon Society has given active support to groups working for this protective legislation. The following arguments are the basis of its campaign.

Hawks and owls of many species are extremely important to agriculture because they control rodents. Because such hawks as the buteos are known to be beneficial in this regard, **partial** protection of birds of prey is often urged. But partial protection is not an intelligent conservation practice for several reasons. In the first place, the average person cannot distinguish between one species of hawk and owl and another. In practice, therefore, partial protection does not protect the hawks and owls it is designated to protect.

In the second place, **all** hawks and owls have a useful natural function. Predators are known today to be a vitally important part of the wildlife community. Predation is one of the controls exercised over all things living in the wild. Under natura conditions, the bird-eating raptor (e.g. Goshawk and Peregrine) cer tainly do take birds. But even i taking birds they perform a positiv useful function. They take the bird most easily caught, in many cas the weaker individuals, helping t guarantee a vigorous breeding popu lation. In this way, they contribut to the intelligent cropping of surplu populations. No form of animal li can increase beyond the capacity o the environment to supply food for i Surplus populations would succum to starvation or disease if not crop ped by predators.

WHAT HAS ALREADY BEEN DONE FOR THE PROTECTION OF BIRDS OF PREY?

There has been a marked extensio of legal protection for raptor throughout North America. The fo lowing list indicates that develop ment. Although the situation is fa from perfect, with only one provinc providing a "model law," it is en couraging to note the recent appea ance of B.C. in an improved categor and the almost-perfect situation Alberta.

The phraseology of legislation varies greatly from place to place, and it is impossible to give this in detail here. For example, where the term "model law" occurs, it will indicate that all raptors are protected except where doing specific harm. The definition of "specific harm" is variable. It is also difficult to state in every case just who is permitted to exercise control. It will mean, however, that all are protected in one way or another, with varying degrees of control in an individual area.

The following is the most recent information available (supplied by John A. Livingston, April, 1958). Birds listed are the raptors which are **not** protected.

CANADA

Alberta: Golden Eagle (also provision for an open season on Great Horned Owl, Goshawk, in winter); **British Columbia:** Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Great Horned Owl, Snowy Owl; **Manitoba:** Goshawk, Sharp-shinned, Arctic Owl (sic); **New Brunswick:** no birds protected which are not protected by federal law except certain game species; **Newfoundland:** Hawks, Great Horned Owl; **N.W.T.:** no birds protected which are not protected by federal law or local game ordinance; **Nova Scotia:** Goshawk, Sharp-shinned Hawk, Great Horned Owl; **Ontario:** model law; **P.E.I.:** Hawks, Owls (Eagles and Osprey?); **Quebec:** Hawks, Owls; **Saskatchewan:** Snowy Owl, Great Horned Owl, Goshawk, Pigeon Hawk, Duck Hawk, Cooper's Hawk, Sharp-shinned Hawk; **Yukon:** Golden Eagle, Bald Eagle, all species of hawks and falcons, Great Horned Owl.

UNITED STATES

In 1955 Ohio and Utah had what amounted to a "model law," and since then California, Florida, Illinois, New York and Rhode Island have enacted model laws, while Maine leaves unprotected only the Great Horned Owl at the moment. Pennsylvania now protects all hawks in the Blue Mountains flyway in autumn, and Virginia passed a new law in April, 1958, details of which are not yet available. Progress is definitely being made!

WHAT IS BEING DONE CURRENTLY?

In British Columbia the Victoria Natural History Society has a committee which has been assigned the job of preparing a brief to the legislature for the protection of birds.

In Saskatchewan this year, the need for protecting birds of prey will be studied by a special committee of the Regina Natural History Society. Any interested local groups are urged to get in touch with the Regina committee through its convener.

The committee hopes that there will be an active response from many natural history societies, fish and game leagues, 4H clubs, agricultural associations, etc. Individuals, too, are requested to write in support of the policy of protection, giving specific arguments whenever possible for the desirability of such protection.

The Saskatchewan Natural History Society also hopes to take an active part in this study. All members of the society are asked to give consideration to the bringing in of a resolution at the annual meeting in October asking for blanket protection of birds of prey. A recommendation to this effect was submitted to the Department of Natural Resources two years ago when the executive learned that a revision of the game laws for the Province of Saskatchewan was under consideration. Following a motion passed at a meeting of the executive on April 23, 1956, a letter was written to the Game Commissioner recommending that the game laws for the province of Saskatchewan include a provision to the effect that **All Hawks, Owls, and Eagles be protected except that a farmer or landowner may destroy Hawks or Owls on the land he owns or occupies, which are doing real damage to poultry or other domestic Animals.**

No action was taken at the time upon this recommendation, and the Saskatchewan Natural History Society is eager to press for a review of the situation. Members are urged to write to us or to the Regina Natural History Society Birds of Prey Committee, and to be prepared to discuss this topic at the annual meeting on October 18, 1958. At the annual meeting we expect to have John A. Livingston, Executive Director of the Audubon Society of Canada as guest speaker, and we can count on his support and guidance in the submission of a resolution to the government.

CO-OPERATIVE BIRD MIGRATION STUDY

The **Blue Jay** is again participating in the U.S.A. Fish and Wildlife Service Co-operative Migration Study. Members who have kept spring migration records are reminded that information is submitted on first seen dates and peak migration for a specified list of species. For the list of species (which is the same for 1958 as for 1957) see **Blue Jay**, June 1957, p. 65. Send records, if possible by June 10, to Dr. Stuart Houston, Box 278, Yorkton.

Further Information on Certain Unusual Saskatchewan Bird Records

In the process of revising the Field Check-list of Saskatchewan Birds, some additional information was obtained pertaining to certain old records. The committee revising the field check-list (C. S. Houston, F. G. Bard, R. W. Nero) has made this information available for publication.

YELLOW-BILLED LOON

The Yellow-billed Loon, *Gavia adamsi,* was listed by Mitchell (Catalogue of the birds of Saskatchewan, 1924) as hypothetical, on the basis of Preble (Athabaska-Mackenzie Report, North America Fauna No. 27, 1908) who said: "He (MacFarlane) informs me that a fine example was killed by an Indian at Fond du Lac, Athabaska Lake, in the spring of 1885, and sent to J. J. Dalgleish."

MacFarlane, in *Through the Mackenzie Basin* (1908) worded the report this way: "In the spring of 1885, a hunter belonging to Fond du Lac, Lake Athabaska, shot a fine specimen of the beautiful loon, which was forwarded to Mr. John J. Dalgleish of Edinburgh, Scotland."

Dr. A. S. Clarke of the Royal Scottish Museum, Edinburgh, in a letter of March 4, 1958, to Dr. C. S. Houston states in part: "We received . . . from Dalgleish in 1886. We have i registered (1886/47) as having com from Ft. Chipewayan but this was no doubt, the headquarters of Mac Farlane rather than the locality a which the bird was shot. Unfortun ately it was destroyed in 1901 owin to its rotting condition. I do not thin there can be any doubt about the ori ginal identification. Not only was th speciment accompanied by one of tha species with which it would be mos likely confused, but it would be com pared, on arrival, with another speci men of *Colymbus adamsii* which w still have and which is certainly cor rectly identified, which came in 186 also from MacFarlane, when he wa up around Ft. Anderson."

LEAST BITTERN

The Least Bittern, *Ixobrychu exilis,* was also listed by Mitche (1924) as hypothetical, on the bas of a sight record at Crane Lake, Jun 1894, by Spreadborough. There i however, a specimen record for Sask atchewan. On July 25, 1927, F. G Bard examined a Least Bittern spec men in the collection of the Biolog Department at the University Saskatchewan. This specimen ha been taken some years before Moon Lake (southwest of Saskatoo and east of Vanscoy) by Mr. H.

Gordon, the curator of the collection. Mr. Gordon, in conversation with Mr. Bard, was unable to give the exact date of the specimen record.

HARLEQUIN DUCK

The Harlequin Duck, *Histrionicus histrionicus,* is not listed by Mitchell (1924). However, there is a mounted male Harlequin Duck in the Swift Current Collegiate Museum which was taken in Saskatchewan. F. Bradshaw, Annual Report, Provincial Museum, 1935, states: "Several pairs of the Harlequin Duck were reported at the Saskatchewan Landing Ferry. A beautiful male specimen was taken on May 31 (1934) and mounted by Mr. Warren, a taxidermist at Swift Current." In a letter to R. W. Nero, George Warren gives the circumstances of its being taken. "This duck was shot at Saskatchewan Landing where the new bridge is north of Swift Current, by one of Dick Hamilton's boys. Dick used to run the ferry."

DIPPER

The Dipper, *Cinclus mexicanus,* does not appear in Mitchell's list (1924). There is a reference to it, however, in Laurence B. Potter's Bird Notes from Southwestern Saskatchewan (Can. Field-Nat. 57: 69-72. April-May, 1943), where the Dipper is listed with these observations: "A dipper in Saskatchewan sounds improbable, but there are on the southern slopes of the Cypress Hills several streams, swift-flowing and with gravelly beds that are well suited to this particular bird. No specimens have been secured, but there have been several reports of the Dipper, nearly always in the coldest winter weather, by persons familiar with the bird in the mountains. There is no doubt that the Dipper will be taken eventually in this part of Canada." Further information on these reports of the Dipper comes from the Saskatchewan Museum of Natural History. Their records show two reported seen at Ravenscrag, May 22, 1917, by Spencer Pearse (whom F. G. Bard knows to have been a careful observer, cautious in making statements).

In correspondence with F. G. Bard (Feb. 3, 1936), L. B. Potter made the following reference: "Spencer Pearse and Neil Pratt, who both are familiar with the Dipper in B.C., have seen the bird in the coulee behind Pearse's house." In the same letter, Potter told of two other men who formerly lived in the coulee but did not know birds as Pearse did, describing the Dipper as being seen by them.

What appears to be an additional sight record was reported by L. B. Potter to the Museum, and appears in the Museum records as follows: "Bob Friel reporting to L. B. Potter, Feb. 8, 1941, says he has watched one 'popping in and out of the water' on Farwell Creek. One of the Gilchrist brothers was there at the time."

SEND FOR COPIES OF THE REVISED FIELDCHECK-LIST

available free from the Saskatchewan Museum of Natural History, Regina.

PRAIRIE NEST RECORDS SCHEME

by **Elmer Fox,** Regina

The Prairie Nest Records Scheme outlined in the March 1958 **Blue Jay** appears to be off to a good start. At the tim of going to press, we have had a considerable number of requests for nest record cards. Because of the questions which have been asked by people requesting record cards, I would like to make two points clear. Many people seem to think that a complete record is required. This is not so. Any nest found, even if visited only once, should be recorded on a nest card.

The other question asked is whether records of common species should be reported. We want reports for all species.

The Prairie Nest Records Scheme is a co-operative effort. Only by the participation of many careful workers in all parts of Manitoba, Saskatchewan and Alberta will it be a success. Reports from Alberta and Manitoba are as important as those from Saskatchewan in covering the prairie area and bridging the gap between the British Columbia and Ontario Nest Records Schemes.

Saskatchewan Natural History Society

Summer Meeting

MacIntosh Point, Emma Lake, June 13, 14, and 15, 1958

The Area: The Emma Lake area lies some 40 miles north of Prince Albert, and on the same latitude as the lower part of the Prince Albert National Park. It was described by Farley M. Mowat (Can. Field-Naturalist, 61: 105-115) in this way, "The country is low and fairly level, although there are a few small stony ridges in the northern sector. There are many lakes, ponds and waterways. Emma, the largest lake, is about seven miles long and three miles across at its widest point. A few of the larger lakes contain islands and rocky or shingle reefs.

"The entire area was originally well forested and is still largely tree covered, although much altered by fires and by lumbering activity. The only settlements are in the southern district where there are two small summer resorts together with a handful of homesteads, many of which are abandoned.

"In the north, the area is largely covered with coniferous second growth timber, predominantly jack pine, spruce and tamarack. The northeasterly section has suffered badly from fire and is partly reduced to tangles of pine slash, and raw burned areas. A few stands of mixed timber, including poplar and birch, exist along the northern margins of the big lakes and on the larger islands.

"To the south, the forest is again partly second growth, but is of mixed composition with deciduous trees, mainly poplar and birch, predominating.

"Throughout the whole of the coniferous area small muskegs and muskeg ponds abound, and these are frequently surrounded by dense growths of tamarack. Small forest streams and marshy rivulets are common and are usually bounded by heavy belts of willow shrubbery.

"Most of the large lakes contain extensive areas of marsh and some sparse reed beds extend from the few open sandy beaches."

BIRDS OF EMMA LAKE

The fauna of the Emma Lake area is predominantly Canadian in character, but a few species common to the Transition Zone such as Ruddy Duck, Franklin's Gull and House Wren occur quite frequently. Birders at the summer meeting will be interested in the list of 156 species for the Emma Lake area submitted by Farley Mowat to the **Canadian Field-Naturalist (61:105-115).** This list recorded observations made June 26—July 22, 1939 by Mowat, Banfield and Hord, and a few notes from previous visits to the area in 1936 and 1937. The list includes the bulk of the resident species which are normally to be expected, but does not include many species which are normally only encountered in migration.

ANNOTATED LIST: Common Loon, Red-necked Grebe, Horned Grebe, Eared Grebe, Western Grebe, Pied-billed Grebe, Great Blue Heron, American Bittern, Canada Goose, Mallard, Gadwall, American Widgeon, Pintail, Green-winged Teal, Blue-winged Teal, Wood Duck, Redhead, Ring-necked Duck, Canvasback, Lesser Scaup Duck, Common Goldeneye, Bufflehead, White-winged Scoter, Ruddy Duck, Hooded Merganser, Common Merganser Goshawk, Sharp-shinned Hawk, Cooper's Hawk, Red-tailed Hawk, Broad-winged Hawk, Bald Eagle, Marsh Hawk, Osprey, Peregrine Falcon, Pigeon Hawk, Sparrow Hawk, Spruce Grouse Ruffed Grouse, Willow Ptarmigan, Greater Prairie Chicken, Sandhill Crane, Virginia Rail, Sora, Yellow Rail, American Coot, Killdeer, Spotted Sandpiper, Solitary Sandpiper, Greater Yellow-legs, Lesser Yellow-legs, Least Sandpiper, Semipalmated Sandpiper, Wilson's Phalarope, Herring Gull, California Gull, Ring-billed Gull, Franklin's Gull, Bonapart's Gull, Forster's Tern, Common Tern, Black Tern, Mourning Dove, Black-billed Cuckoo, Horned Owl, Snowy Owl, Long-eared Owl, Nighthawk, Ruby-throated Hummingbird, Belted Kingfisher, Yellow-shafted Flicker, Pileated Woodpecker, Yellow-bellied Sapsucker, Hairy Woodpecker, Downy Woodpecker, Black-backed Three-Toed Woodpecker, Northern Three-Toed Woodpecker, Eastern Kingbird, Eastern Phoebe, Yellow-bellied Flycatcher, Traill's Flycatcher, Least Flycatcher, Western Wood Peewee, Olive-sided Flycatcher, Horned Lark, Tree Swallow, Cliff Swallow, Purple Martin, Gray Jay, Blue Jay, Raven, Common Crow, Black-capped Chickadee, Boreal Chickadee, Red-breasted Nuthatch, House Wren, Winter Wren, Long-billed Marsh Wren, Catbird, Brown Thrasher, Robin, Hermit Thrush, Swainson's Thrush, Veery, Ruby-crowned Kinglet, Cedar Waxwing, Solitary Vireo, Red-eyed Vireo, Black-and-white Warbler, Tennessee Warbler, Orange-crowned Warbler, Yellow Warbler, Magnolia Warbler

Black-throated Blue Warbler, Myrtle Warbler, Black-throated Green Warbler, Blackburnian Warbler, Chestnut-sided Warbler, Palm Warbler, Ovenbird, Mourning Warbler, Yellowthroat, Canada Warbler, American Redstart, House Sparrow, Western Meadowlark, Yellow-headed Blackbird, Redwinged Blackbird, Rusty Blackbird, Brewer's Blackbird, Cowbird, Rose-breasted Grosbeak, Purple Finch, Pine Grosbeak, Commcn Redpoll, Pine Siskin, American Goldfinch, Red Crossbill, White-winged Crossbill, Rufous-sided Towhee, Savannah Sparrow, Leconte's Sparrow, Sharp-tailed Sparrow, Vesper Sparrow, Slate-colored Junco, Chipping Sparrow, Clay-colored Sparrow, White-crowned Sparrow, White-throated Sparrow, Lincoln's Sparrow, Swamp Sparrow, Song Sparrow, Lapland Longspur, Snow Bunting.

Route: No. 2 Highway north from Prince Albert—30 miles. Take Sunnyside turn-off, proceed ¼ mile, turn left, follow lake road 3 miles to MacIntosh Point. Look for markers along route frcm Highway No. 2.

Registration: at Registration Tent upon arrival. Fee $1.00 per adult, no charge for children accompanied by parents.

Accomodation: Keys are available at Registration Tent for reserved cabins. Tenting and trailer facilities. General store on camp site. Those desiring to stay in Prince Albert make their own arrangements.

If you wish accommodation at MacIntosh Point and have not already sent in the application form from the March issue of the **Blue Jay,** phone Miss Jean MacKenzie, 10-22nd St. East, Prince Albert. Since the Prince Albert society has limited accommodation listed (6 cabins on the north shore, 8 cabins on the south shore, and 9 rooms at the hotel), you should phone **immediately** for last-minute accommodation.

PROGRAMME:

Friday, June 13

7:00-11:00 p.m. Registration.

9:00-11:00 p.m. Forest Inventory programme — Aerial photography forest cover mapping. Trained forest technicians in charge.

Saturday, June 14

6:00-7:30 a.m. Morning stroll, at your own inclination (suggest Murray Point for birds—3 miles).

7:30-8:15 a.m. Breakfast Club—Hotel—late arrival registration.

8:15-8:45 a.m. Headquarters—final instructions re: transportation, introduction to guides, programme for day.

8:45-8:15 a.m. En route to north end Christopher Lake—"follow the leader."

9:15-12 noon. Forest field trip—conducted by trained personnel—identification of forest plant life and their relationship.

12:00-1:00 p.m. Lunch on parking site. Sandwiches, doughnuts may be purchased. Tea and coffee free. Display of forest fire suppression equipment.

1:00-4:00 p.m. Forestry (special field trip—to be explained at programme for the day); Forest Pathology (tield trip will be conducted by experts. Tree diseases, fungi, malformations, etc. will be described); Photograph (bring your cameras and your skill).

4.00-4:30 p.m. Coffee break.

4:30-6:30 p.m. Free time.

6:30-7:30 p.m. Dinner.

7:30-9:15 p.m. Game Management (at Headquarters Hall)—films and speaker: Wildlife and its place in the forest.

9:15-9:30 p.m. Coffee break.

9:30-10:15 p.m. Guest speaker, A. T. Davidson, Assistant Deputy Minister of Natural Resources.

Sunday, June 15

6:00-7:30 a.m. Sunrise Serenade: fishermen, bird watchers or what have you.

7:30-8:30 a.m. Breakfast at Hotel.

8:30-8:45 a.m. Headquarters Hall—day's programme, introductions, etc.

9:00-12:00 a.m. Fish Biology—lectures, displays, films, etc. Fisheries biologist in attendance. "Allah does not deduct from man's allotted span the hours he spends in fishing."

12:00-1:30 p.m. Dinner: northern menu.

1:30-3:30 p.m. Forest Entomology in the Hall—speaker, films and displays—insects of the forest.

3:30-4:00 p.m. Summary—A. Dickson, Forester.

4:00-5:00 p.m. Lunch.

Plant Notes

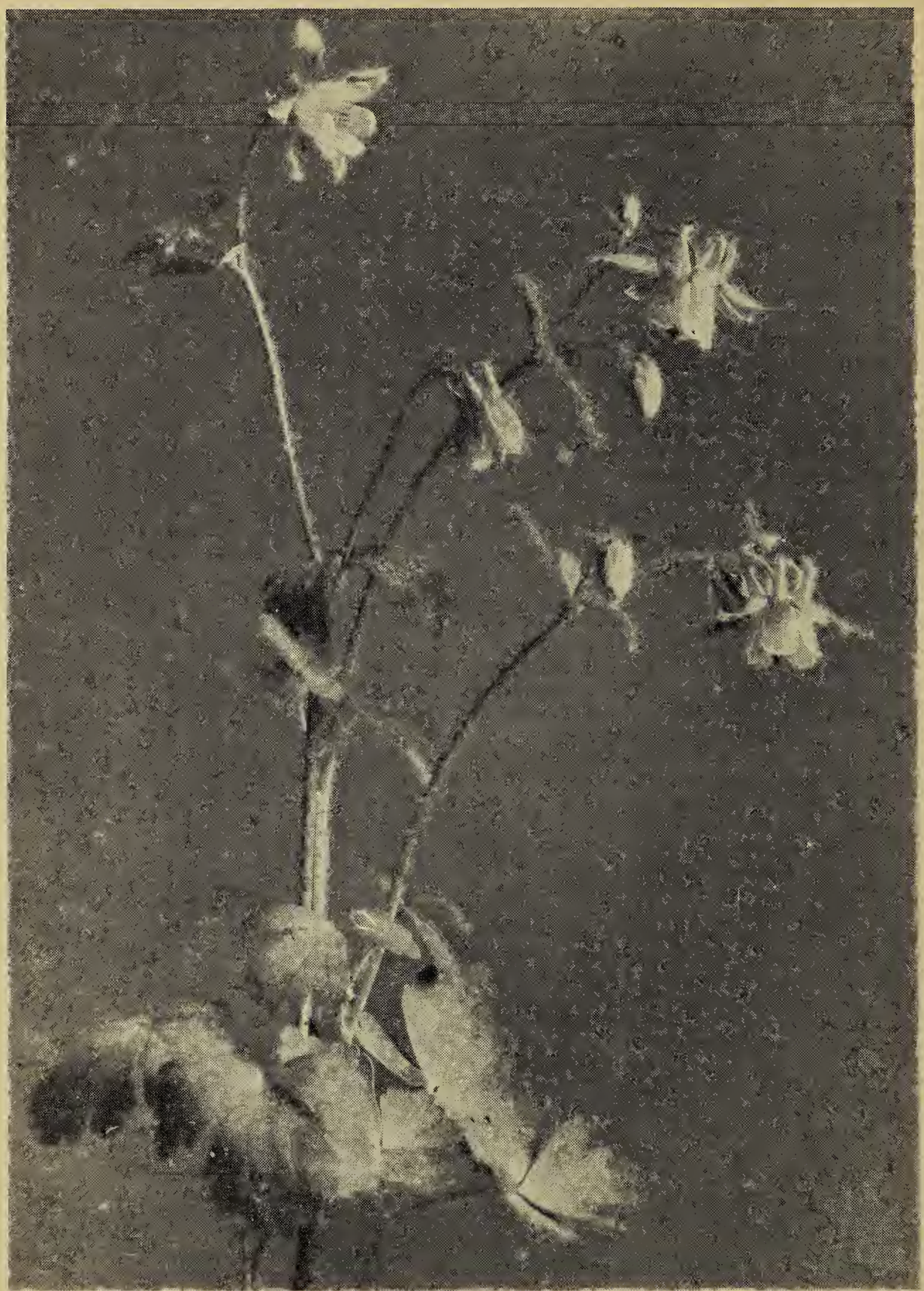


Photo by W. C. MacCalla

SMALL-FLOWERED COLUMBINE

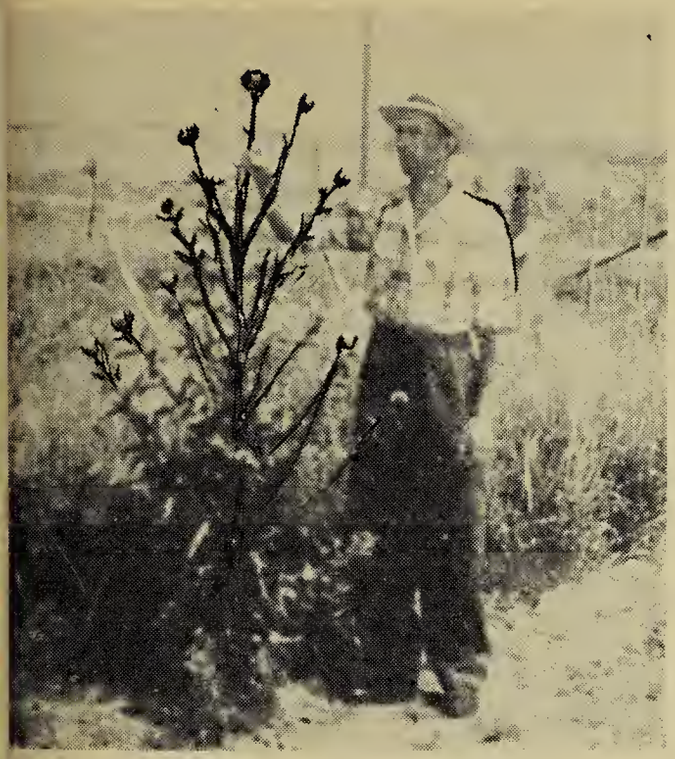
AQUILEGIA BREVISTYLA HOOK.

Our wild Small-flowered Columbine has dainty flowers with sepals and spurs blue or purple, and with the expanded portions of the petals creamy-white.

The two cover illustrations and the lovely photo above have been chosen for the June issue of the **Blue Jay** to represent typical plant and bird life of the area in which we are holding our annual outdoor meeting. This year we are to meet at MacIntosh Point, Emma Lake, June 13, 14 and 15. Can you come for all or part of this time?

Seen By A Seer

by J. **Boswell Belcher,** Dilke



NODDING THISTLE

The Nodding Thistle (*Carduus nutans L.*) in this picture was photographed on the road allowance about three-quarters of a mile north of the Edwards' ranch in the Arm River valley. The ranch is east of Findlater and about three-quarters of a mile off No. 11 Highway.

The first time I saw these spectacular thistles was in July, 1945, on S.W. ¼ 28-21-24 W2 on a field we were plowing which had been cultivated land abandoned for about five years. They were such sturdy, husky-looking plants that we were concerned about the possibility of having to contend with them as serious weeds. When I reported them to our Ag. Rep. (then W. J. Palmer), he told me of the occurrence of these thistles in the Davidson district where there was one quarter section heavily infested with them. Because this quarter section belonged to a farmer named Podratz, the thistle was locally known as "Podratz' Thistle." In the years since then, however, the Nodding Thistle has proven not to be a very prolific weed. These thistles cause no trouble in cultivated fields or pasture land; in fact, even yet they only appear in isolated spots in our district.

A few years ago I read a report on the occurrence of the Nodding Thistle in the *Canadian Field-Naturalist* (68: 35, 1954) in which specimens were noted from the following Saskatchewan locations: Craven, Chamberlain, Craik, Davidson, Dundurn and Wilkie. Since all these stations with the exception of Wilkie are on the Canadian National Railway line from Regina to Saskatoon, and since Wilkie is a continuation of the same line running west from Saskatoon, the writers, G. A. Mulligan and C. Frankton, concluded that the railway was the means of dissemination. Because an Argentine plant illustrated and described by Cabrera (1941) appeared to be of this variety, the writers thought it possible that this thistle was introduced into Saskatchewan in rape seed of Argentine origin.

In our district, though classified as a weed, the Nodding Thistle seems to give no cause for alarm, but a large specimen in bloom is certainly a majestic and spectacular sight.

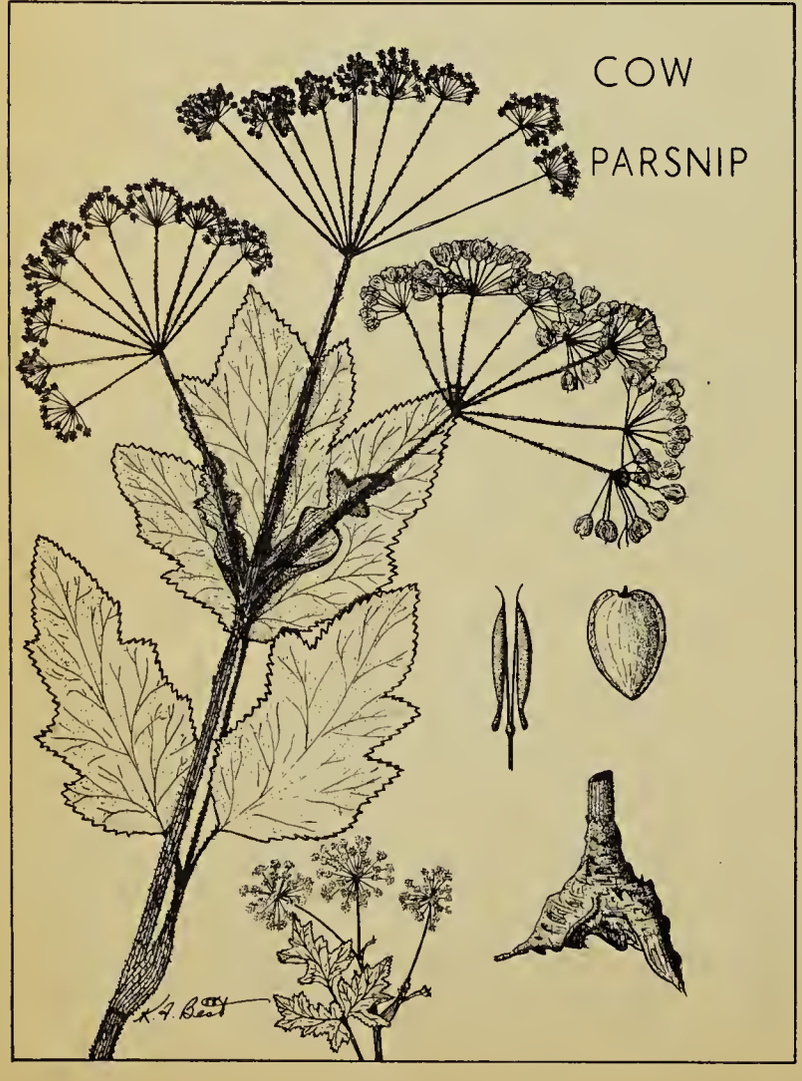
EDITOR'S NOTE: *Carduus nutans L.*— Nodding Thistle is listed in August J. Breitung's *Annotated Catalogue of the Vascular Flora* (1957) with the following description of range: 'Waste places and roadsides. Craik, Davidson, Renown (UNS); Wilkie, Craven, Dundurn (DAO). Reported from Mortlach by Hudson in Can. Field-Nat. 65: 209, 1951."

Do you know this thistle and what is your experience with it? If you can add to the information contained in this article we would appreciate hearing from you. Please give the exact land location and the size of the infestation in your area now. Tell us whether the weed first appeared in a field, along a road or highway, or on a railway right-of-way. We would be interested in knowing when the weed first appeared and how rapidly it is spreading. Are you alarmed at the way the plant is spreading in Saskatchewan? If you think that steps to eradicate this weed should be taken please give your reasons and suggestions.

Edible Plants of Saskatchewan

by **Keith Best** and **Archie Budd,** Swift Current

In continuing our discussion of native plants with edible roots we must remember that the Indians and also the pioneer settlers of our prairies were less fastidious in their tastes than we are. The bulbs of any of the wild onion species were edible, either raw or cooked, and were eaten by the Indians with great relish. They were used to some extent by homesteaders, but the flavour was somewhat too strong to be really pleasant. Care had to be taken to distinguish between onions and Death Camas, a very poisonous plant. The onions have pink or white flowers borne in umbels and an onion-like odour to the roots, while the Death Camas has yellowish flowers in a spike-like raceme and its roots do not have the onion odour.



The bulbs of the provincial em blem, our Prairie Lily, were of ten eaten like potatoes by th Indians.

The Indians were fond of th roots of the Cow Parsnip (*Hera cleum lanatum*) which are re puted to taste like Swede tur nips or rutabagas. The larg broad leaves and white flowe in huge, plate-like umbels fro 6 to 12 inches across are a fami liar sight along woodland mar gins and stream banks and giv the names to some norther rivers, Carrot and Parsni rivers. Another plant of th Umbelliferae family is th Squaw-root or Yamp (*Perideri dia gairdneri*). It bears tube which were a very popular foo for Indians. The Squaw-roo however, is a montane plan only found in our province i

the Cypress Hills. It was described and illustrated in the December 1956, **Blue Jay,** pages 124-5.

The coarse roots of the Wild Licorice (*Glycyrrhiza lepidota*) were eaten or chewed by both Indians and early settlers, after the brown outer skin was removed. The pioneer homesteaders would often chew the roots, not only for the pleasant flavour somewhat like that of "Spanish root" of our schooldays, but also because it was thought to quench thirst. Wild Licorice is found in moister spots across the prairies and bears pinnate leaves with glandular dotted leaflets and spikes of whitish pea-like flowers. Later on there are clusters of reddish-brown fruiting pods, each about half an inch long and covered densely with long, hooked prickles. These stick tenaciously to one's clothing and to the hairs and fur of passing animals. The Licorice of commerce (*Glycyrrhiza garbra*) is a southern European plant of the same genus but with a much stronger flavour. It has been said that the roots of our Wild Licorice have been used to flavour cheap candies and to produce the froth on beer.

The roots of the Dotted Blazing Star (*Liatris punctata*) were also eaten by Indians. This pretty plant with its rose-purple flowers is very common in the drier parts of the province. It bears coarse, fleshy, and sometimes corm-like roots.

We have very few plants with poisonous properties and they are easily distinguished. A free Canada Department of Agriculture Publication, No. 900, describes and illustrates the poisonous plants.

Boys' and Girls' Section

edited by **Joyce Dew**, Saskatchewan Museum of Natural History, Regina

GOLDFINCH, by Doreen Kovalyk, age 14, Springside, Sask.

Comments and Prize Winners

Keith Winstone from England writes about his experiences raising silk worms. This is the first letter we have had that tells about insects and I hope it will encourage some of you to observe these interesting animals. Try raising some of our local insects. Caterpillars can be kept quite easily if you feed them the same kind of leaves or plant that they were eating when captured. They can be kept in a glass jar with a top which will permit air to enter, for example a screen. Why not make a collection of insect eggs and see how many different kinds you can collect? They will probably hatch out in a day or so, then you can watch them feed and grow.

Murray Thompson tells how he set up a bird feeding station and what birds came to feed from it. Once your bird feeding station is set up try to get to know some of the individual birds which come to it and observe their actions. Sometimes male and female look alike but their actions are quite different. Try to learn to tell them apart by their behavior as well as by their appearance Keith and Murray are the prize winners for this issue.

CONTEST RULES

Any young person may submit material for printing in this section of *Blue Jay*. The entries must be first-hand observation in the form of letters, stories, poems, black-and-white sketches or photographs. Letters and stories should not exceed 500 words. All entries must be accompanied by the name, age and address of the sender, and the name of his or her school.

Two or more book prizes will be awarded with each issue of the *Blue Jay*. Teachers who send in entries from their pupils may also qualify for a prize. Winners will be sent a list of books from which to select their prize. Send in your nature observations and share your experiences with others. Entries should be addressed to Boys' and Girls' Section, *Blue Jay*, 2335 Athol Street, Regina. The closing date for the next issue is July 15, 1958.

Feeding The Winter Birds

by **Murray Thompson**, age 9,
Box 299, Naicam, Sask.

The day before Christmas I set up a little spruce tree in the window box outside our kitchen window. We tied pieces of suet on the little tree and sprinkled bread crumbs along the window-box.

It was not long before several Chickadees came to eat our suet and crumbs.

After a while a Downy Woodpecker came zooming toward our window but he was too afraid to eat. It took him about three weeks to get over his fear. Now he comes three times a day for his suet, and is not one bit afraid of us. He doesn't eat any crumbs. He and the Chickadees are quite friendly with each other, and eat together.

Downy's tail is rough and untidy because he balances on it while he eats.

Raising Silkworms

by **Keith Winstone,** London England

I have been receiving the "Blue Jay" for several months, sent to me by an uncle in Edmonton, and enjoy reading it very much. I thought you might like to know of my experiences in keeping silkworms.

I received the eggs from Lullingstone Silk Farm and we hatched them out at school. The eggs, about 40 to 50 in all, were no bigger than the head of a pin. We hatched them out on the top of a heater, at about 70-75 degrees F., and we were successful in our class, in hatching about 40. When I first saw the worms they were no longer than a quarter of an inch and looked like black threads of material. We fed them on ordinary lettuce at first but changed to mulberry leaves, which we found to be much better. It was my job to feed and clean them out and to look after them. In about one and a half weeks they were about an inch in length. Also they shed their skin. This I was told is due to their size. The more they eat the fatter they grow and they soon shed their skin. This was done in a marvelous way, as even their mandibles, eyes and feet were shed along with their skin. They did this four or five times.

When holidays started I brought them home. They were then about an inch and a half long with 13 white body segments. The last segment had a yellow spike on it and I could find no apparent reason for it. They grew rapidly until when almost three inches in length their skins began to grow almost transparent, like a grape.

Soon after this the spinning began. I made several paper cones and placed them inside. First they spun a figure eight, then the main cocoon began.

The cocoon was shaped like a peanut, and it took about twenty-four hours to make. When they had all finished spinning I unwound the cone and picked the cocoons from them. Then I placed them in neat rows in a chocolate box and sent them to the Lullingstone Silk Farm.

If I had not done this, the chrysalids would have completed their change and would have issued from special glands in their head, a substance that would rot the silk so it could break out, making the silk useless to spin. At Lullingstone, where the silk for the Queen's wedding garment was made, they spun it for me and sent the finished raw silk to me, with a letter saying that it was first class silk, 20-22 denier.

NOTE: Keith enclosed a few strands of silk spun by his own worms.

Weasel Observations

Lyndon Reeve, Grade 8,
Oakshela, Sask.

One bright sunny day as I walked through the small trees where there were a great many Bush Rabbits, I saw a small white flash right in front of my feet. After a few minutes of looking around I saw a small hole in the soft snow. Going farther I saw more small holes in the snow and a few moments later I saw the smallest weasel I have ever laid my eyes on. It was about four inches long from head to the tip of its tail. The little fellow ran when he saw me, right into a small soft snow bank making a hole the same as I had seen back further. A few minutes later there were four or five little weasels running across the white snow leaving little tracks in it. Then I saw a larger weasel. I wonder if the larger weasel was those little fellow's mother?

NOTE: It is unlikely that there would be young weasels at the time of the year when snow is on the ground. Probably the smaller weasels were the Least Weasel and the larger one was the Common Weasel or Long-tailed Weasel. Members of the weasel family are known to chase other members of the same family. For example, the Martin chases the Fisher. What Lyndon saw, then, may have been a chase.

A Chase

Carolina Kotulski, age 15
Edgewood School.

One rather cold winter evening, almost a year ago to be exact, I set out to check on the cattle. My trail lay along the edge of thick clumps of black poplar trees, and across a stubble field, and spaces of prairie where the snow was deep and hard to walk through. When I had passed a few clumps of black poplars a deer sprang out, pursued by a coyote. I watched them until they were out of sight, then continued on my way. I hadn't gone very far when the deer and the coyote again crossed my path. What I couldn't understand was that the deer was very tired and the froth dripped from its mouth, while the coyote wasn't even running too hard. I don't know the outcome of the chase but very puzzled I went on my way.

My question wasn't answered for a number of weeks but then one day a friend came down. We started talking on the subject of deer and my question was soon answered. He started to tell us about a chase he had seen.

One day while he was riding after cows down in the Pipestone, he saw a coyote flush a deer out of the bush and start to chase it. This man was on higher ground and was able to see all that went on below.

All frightened animals will run in circles and this deer was no exception. The coyotes knew this also. There were two of them and they knew their work. One would chase the deer, while the other concealed itself. When the deer came this far, the concealed coyote would take up the chase while the other coyote cut across country and waited for the deer which continued to run in a circle. Eventually the deer played out and the coyotes closed in for the kill.

NOTE: The statement that all frightened animals run in circles is rather sweeping and very difficult to prove. It is known that some animals when chased will run in circles. This could be explained in part by the fact that they prefer to run in territory which is familiar to them. Another explanation of the deer's behaviour could be that the coyotes are chasing it in such a way that it cannot very easily avoid going in circles. Carolina was quite observant to notice the difference in condition of the two animals as she describes them in the first paragraph.

JUNCO by Eugene Stauffer, age 10, 153 Tupper Avenue, Yorkton.

Bird Observations

Philip Keller, age 14,
Wilkie, Saskatchewan.

One day two of my friends and went out on a hike. Going through a huge clump of trees we noticed a large nest high in one of the trees. So we decided to climb up and see what was in the nest. We were completely surprised to find three duck eggs in the nest. We took the eggs and decided to take them home, put the eggs under a hen and hatch them. We also decided to raise the ducklings. On our way home we went through the same clump of trees and decided to take one more look at the nest. Were we surprised when we looked in the nest and saw a duck sitting in it. This happened about two years ago.

NOTE: The duck's nest which Philip found in a tree was probably that of a Mallard duck. Mallards are known to nest occasionally in an abandoned crow's or hawk's nest. We print this note because Philip's is an unusual observation. Perhaps Philip would have learned more, however, by watching the duck hatch her eggs under natural conditions than by taking the eggs home to hatch under a hen.

FREE

You may obtain your Field Check-list of Saskatchewan Birds and your Prairie Nest Record Cards by writing to the Saskatchewan Museum of Natural History, Regina. If you are interested in birds you should use these free cards.

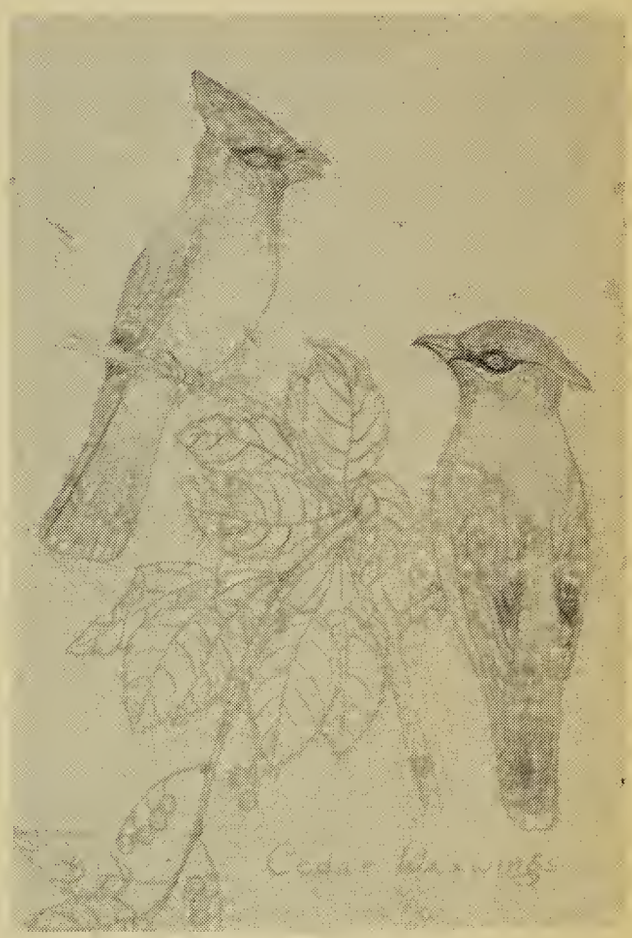
Extracts From Letters

Harry Wolf of Arran, Saskatchewan, writes about some robins he observed while they were bringing up their young. "The baby robins didn't have feathers on them yet. Mr. and Mrs. Robin were busy carrying insects and fruit. They would keep watch and take turns carrying food. In this way they gave protection. The babies were soon falling out of their nest and they were putting on feathers. One day I came and the young robins were flying. Mr. and Mrs. Robin made their second nest in the tree."

Stanley Pawliw, Springside, Saskatchewan, thinks that coyotes are suspicious of men. As he tells it, "I have seen a coyote come up to my tracks and make a big leap over them and keep running for about ten rods. Still others will follow your tracks." Stanley goes on to say that the scent of skunk "is very sufficient" to attract coyotes and that he has noticed that coyotes travel parallel to sand ridges.

Cheryl Jensen, Broadview, Saskatchewan, writes "In an old shed close to our house a very teasing squirrel resides. I say teasing, because he teases our dogs dreadfully by chattering and scampering madly around on the roof. The poor dogs sit their barking endlessly. Sometimes, the dogs completely ignore the squirrel; nevertheless, the scamp chatters all day."

Brian James, Broadview, Saskatchewan, tells about a feeding station he made. "I made a little bird house, took off one side and put some rendered fat in it. In a few days the Chickadees were so tame that all I had to do to catch them was to put food in my hand. They would come and sit on my hand and eat the food."



CEDAR WAXWINGS
Agnes Dobryden, Sanford, Manitoba.

Salamanders Make Interesting Pets

by **Joyce Dew,**
Museum of Natural History

Have you ever found a lizard-like animal crawling over the damp ground after a rain? If you pick this animal up and examine it closely you will find that its skin is moist and shiny and its toes soft and clawless. This animal, although sometimes mistaken for a lizard because it is shaped like one, is a salamander. Salamanders are commonly found in damp places, underneath logs and in cellars. One salamander that I know of was even drowned out of a gopher hole, much to the surprise of the small boy with the water pail!

Salamanders, along with frogs and toads, are amphibians. Most amphibians must live close to the water and spend part of their lives in it. That is why they are called amphibians—animals that live both in water and on the land. Most amphibians lay their eggs in water and the young when hatched spend the first part of their lives there. As adults, most of them are found living on land but still keeping quite close to the water.

You are probably familiar with tadpoles, the young of frogs and toads, but how many of you have seen young salamanders? Young salamanders like the young of many other animals are called larvae. The larval salamanders have external gills. These you can see quite plainly as three long finger-like projections on

Sketch by Joyce Dew

SALAMANDER, on left, gills being absorbed, on right, gills completely absorbed.

each side of the head. There are fine black gill rakers extending down from them. Otherwise the larva looks somewhat like the adult—it is long and slender, has a tail and sprawls along or swims with its short legs.

We had two six inch salamander larvae brought to the Museum last winter. They were found in a dug-out near Marquis when they swam to the surface where a hole had been cut in the ice. Shortly after being brought to the Museum their gills started to disappear gradually; they were being absorbed into the salamander's body. The adult salamander unlike the adult frog and toad does not lose its tail when it becomes an adult. It sometimes happens that some salamander larvae do not develop into the land form; they spend their entire life in water where they eventually breed. Such salamanders, known as Axolotls, grow the same size as the adult form, but never lose their gills.

The salamanders which we have at the Museum are Tiger Salamanders, one of our most common species. The adult which grows from 6 to 13 inches is usually dark green in color with short yellow bars on it's back. Underneath it is a pale greenish yellow or grey in color.

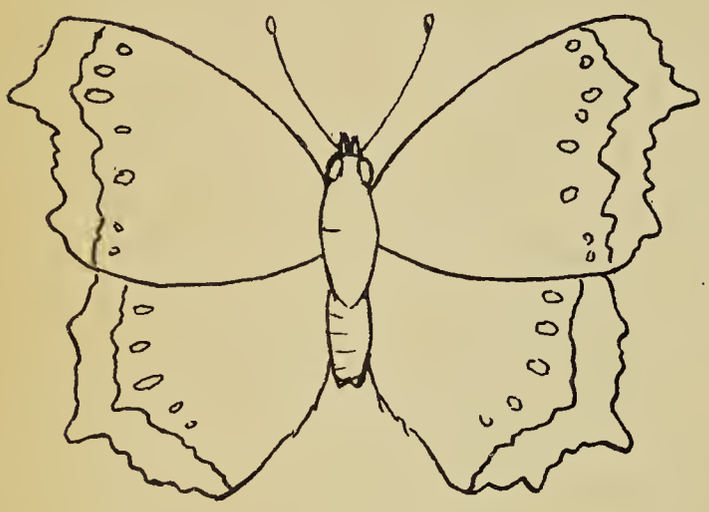
Salamander larvae can be kept under observation in a jar containing water. The adults can easily be kept as pets if you remember that even when full grown they must have water to swim in and dry ground too. A large wooden box with moss or dirt on the floor and a pan with water sunk into it will provide comfortable surroundings for your salamander. A screen cover over the top or a piece of glass if the air is dry will keep the salamander in and the cat out. Feed the salamander earthworms or any insects you can find. Sometimes salamanders can be persuaded to eat raw meat if you dangle a strip in front of them. You might like to try growing some of the plants found near ponds and marshes in with your salamanders.

Let us hear about your experiences raising salamanders.

NOTE: A mimeographed booklet "How to Conduct a Nature Study Group" is available from the Museum. It includes instruction on keeping small animals for pets as well as various other activities which can be carried out by a group interested in Nature Study.

Phenology

The Study of Recurring Natural Phenomena



Sketch by Joyce Dew
MOURNING CLOAK BUTTERFLY

Recently a group of four Regina naturalists, three of them employed by the Museum, noticed an interesting coincidence: each had observed the first appearance of the Mourning Cloak Butterfly on April 6 this year. The observations took place in four different localities: Riverhurst, Joyce Dew; Regina, R. Nero; King's Park, F. Brazier and Mortlach, F. Lahrman. In the ensuing discussion, someone commented on the amazing fact that year after year one species of bird too will appear in the same locality on practically the same date. Further discussion led to our attention being drawn, by Dr. Nero, to a scientific study of "first appearances": a phenological record for Sauk and Dane Counties, Wisconsin, 1935-1945. (1947. Ecological Monographs, 17:81-122) by Aldo Leopold and Sara Elizabeth Jones. An article in the Canadian Field-Naturalist for April-May, 1943, called *Phenology, the Most Natural of Sciences* by R. Glendenning deals with the same subject. Ideas and, in fact, whole paragraphs have been "lifted" from these studies for this article.

Phenology is described as "the study of recurring natural phenomena" and this science is alive among farmers, gardeners, Indians and nature lovers whose work or interests are outdoors. Among contemporary phenologists we find also botanists, foresters, game managers, ornithologists, range managers and zoologists. Phenology, in short, is a "horizontal science" which transects all ordinary biological professions. Whoever sees the land as a whole is likely to have an interest in it. Phenology is more ancient that the "vertical" categories which it transects; its first paper published about 974 B.C., cuts across three sciences then not yet born: meteorology, botany and ornithology:

> For, lo, the winter is past
> The rain is over and gone;
> The flowers appear on the earth
> The time of the singing of birds is come
> And the voice of the turtle is heard in our land.
>
> (Solomon 2:12)

Records of seasonal incidents in both plant and animal life are kept by those interested in this science. Plant records usually consist of dates of first leafing, flowering or appearance of autumnal color. Native plants are most frequently used. The times of arrival and departure of migrant birds provide good records of seasonal activity and the first songs of resident species are also useful. Insects are used to a lesser extent; the earliest flight of the honey bee is a staple record and, as noted above, the butterflies may be fairly constant in their appearance.

The recording of seasonal occurrences has been criticized by some as an interesting hobby but of little scientific value; however, phenological studies when properly organized using data from hundreds of observers—sifted, tabulated and averaged—may yield some striking facts relative to climate, wild life, and cycles of growth. In England, studies have shown that cycles of growth have occurred with an average length of 12.1 years. For a discussion of a possible cycle in the numbers of Snowy Owls see *Blue Jay* for December, 1957, page 155. In the Wisconsin study, which is very detailed and deserves careful study, an example of a practical use for phenological data is given. A game manager learns from scientific data that the most frequent date of first egg-laying in

pheasants is May 6. What else is going on at that time? Records show spring grain well up, the Franklin Ground Squirrel has emerged, blue grass will head out in eight days, Sugar Maple, Chokecherry and other plants are in first bloom. In a year when the season is advanced, the same game manager may start looking for eggs when the other phenomena mentioned were observed.

Part of the terrain for which data was gathered in Winconsin was prairie, so the table showing the first blooming of prairie plants is of interest to us. The following dates are given for familiar plants: Pasque Flower (April 10); Hoary Puccoon (May 2); Shooting Star (May 16); Lilac-flowered Beard-tongue (June 14). it is interesting to compare these dates with the following supplied by Mr. Lloyd Carmichael, Regina: Pasque Flower (April 8); Hoary Puccoon (May 6); Shooting Star (June 4); Lilac-flowered Beard-tongue (June 18). A chart prepared by Arch. C. Budd giving the flowering sequence of spring plants may be found in the March 1957 *Blue Jay*.

For those who are keeping records of first appearances, R. Glendenning has some useful suggestions. Plant records kept should be of cultivated plants that are successfully grown in your area, or of native plants growing in a location where they are unlikely to be destroyed, such as on wild land or roadsides. It is important that records be kept for the same location each year. Frogs croaking should be recorded from the same swamp, and birds from the same farm or similar area. Records kept in this way from year to year have significant comparative value. When they have been kept for many years, these records are also interesting to other people keeping similar records. A comparison of such long-term records would make a worthwhile study for the *Blue Jay*.

Mammal Notes

Skunk Attacked by Badger

by **Joyce Gunn**, Spirit Lake, Sask.

At sunset on January 7 Mother and I were walking towards home along a well-packed road when we saw just ahead of us a skunk hurrying south in our direction. We decided discretion was the better part of valour and stepped off into the snow to give the skunk the right of way! It paused only momentarily to look at us then continued southward at a skunk gallop.

As we stepped back on to the road we saw the reason for the half-grown skunk's haste. It was being chased along the road by a badger. The bader stopped, however, when he saw us and turned back north. We followed him for about 100 yards before he turned off into the bush, bleeding profusely from one of his front paws. He wasn't much larger than the skunk. Watching the scene from a poplar near the road was a great horned owl that flew just as we saw the badger coming.

A few yards north of where the badger turned off we came to a spot that reeked of skunk, and then about fifty yards further on we came to the the battle area. Skunk and badger must have gone at it tooth and nail, for the hard-packed snow was blood-stained and discoloured and there were claw marks around. Closer to home we saw where the skunk had come out of the bush, and farther on, the badger. Apparently the badger had been wounded before tackling the skunk as there were faint blood stains on his trail before he got to the road.

Two days later I heard that the skunk was killed by a dog a half mile south of where we had met it and only ten minutes later—so he was really making time! People also remarked on the fact that the skunk seemed to be wounded. No doubt he was exhausted after his run, to say nothing of his fight with the badger.

Interesting Observations of a Deer

by **A. J. Hruska,** Gerald, Sask

Have you ever seen a deer rubbing its knees (hocks) together? Perhaps very few of you have, as deer are very shy creatures. It is only after they have become used to your being near them that they will perform some of their antics in your sight.

Two winters ago I observed these actions of a White-tailed Deer almost daily. That winter the deer were starving but this one made himself quite at home at my straw stack and oat granary. After hauling the manure out in the morning I would proceed to the oat straw stack for straw. Almost every day I would find the big deer bedded down in the dry straw. Sometimes the deer would leap five or six feet to get to the top of the straw cut I was using. At first, when I approached the stack the deer would leave. As I came to the stack daily, he became tamer. Finally, I could drive right up to the stack and stop before he got off the straw. After coming off the stack he would walk over to the granary for his oats. If there wasn't enough on the ground he would lick at the crack and make the oats run out.

After breakfast, the deer would climb up on the big snowbank and watch me pitching straw. Then, having satisfied his curiosity, he would saunter off about 150-200 feet. There he would perform his antics. At this point he would buckle up slightly, put his hind feet together and start to tramp, rubbing his hocks together. This lasted about two or three minutes. His actions reminded me of a turkey tom during breeding season, but they did not seem to be of the same order. After tramping in this fashion for a time he would lift his right hind leg and lick the inside of his left hock. This action reminded me of cattle licking their lousy spots. Sometimes this antic was repeated a few steps further on. Then the animal would saunter off to the valley and join the other starving deer.

Now what conclusions can we reach? The deer wasn't voiding as this was performed at the granary. It's not likely to be sexual behaviour. An examination of the hock of the deer will reveal that on the inside is a large triangular patch of stiff bristly hair. If you work your fingers in this area and smell the exudation you will find that it has an agreeable odor of pine. So, the only conclusion we can arrive at is that the deer was cleaning out his "ears". Anybody agree?

NOTE: Olfactory signals probably play an important role in the lives of wild animals but their function is little understood. Scent glands are well known in mammals and are located in dozens of different places in different species. The metatarsal gland described by Hruska is present in both sexes in both species of deer. In the White-tailed Deer (*Odocoileus virginianus*) the actual gland is about one inch in length; in the Mule Deer (*Odocoileus hemionus*) the gland is about five inches long. One would hesitate to say without further knowledge of the normal behaviour whether the action described above was an instinctive behaviour to help distribute the scent material or whether it was simply a response to an irritation produced by excessive secretion of the gland as suggested by Hruska. It may well be both.

Mr. Hruska's report is a good example of careful observation and recording. Even, if we do not know the exact nature of the phenomenon, the published observation remains as a permanent record which can be studied and which contributes to our further knowledge of a wild animal. The material published in the *Blue Jay* is not only of interest to us now but will continue to be of interest as long as people are interested in natural history. To-day's information is tomorrow's knowledge. R.W.N.

Further Record of Raccoon in Saskatchewan

by **Stanley M. Durr,** Bromhead, Sask.

This winter I trapped a raccoon on the creek here (Long Creek). My father homesteaded here in 1903 and says it is the first he had ever seen in these parts.

Additional Gray Squirrel Information

by **Robert W. Nero,**
Sask Museum of Nat. Hist.

The Museum has received a Gray Squirrel (*Sciurus carolinensis*) from W. Brownlee, Rose Valley (about 3 miles south of Tisdale). This squirrel was reportedly killed in March, 195

in a hen house. This record and previous records for Strasbourg and Saskatoon (see **Blue Jay**, 16: 33-35) are believed to represent introduced animals, the normal range of the Gray Squirrel being far to the southeast. Some indication of the possibility of further records has just been received from Ralph Stueck, Abernethy. He reports that three captive Gray Squirrels (obtained from Ontario) escaped during the winter from his home.

EDITOR'S NOTE: The list of references used in the article by R. W. Nero on the Gray squirrel (*Blue Jay*, 16:33-35) was inadvertently omitted in the last issue. Literatcre cited for that article included:

ANDERSON, R. M., 1946—Catalogue of Canadian Recent Mammals. Nat. Mus. Can. Bull. No. 102.

DE VOS, A., R. H. MANVILLE and R. G. VANGELDER. 1956.—Introduced mammals and their influence on native biota. Zoologica 41:163-194.

HIBBARD, E. A. 1956.—Range and spread of the Gray and Fox Squirrels in North Dakota. Journ. Mamm., 37:525-531.

"Gophers"

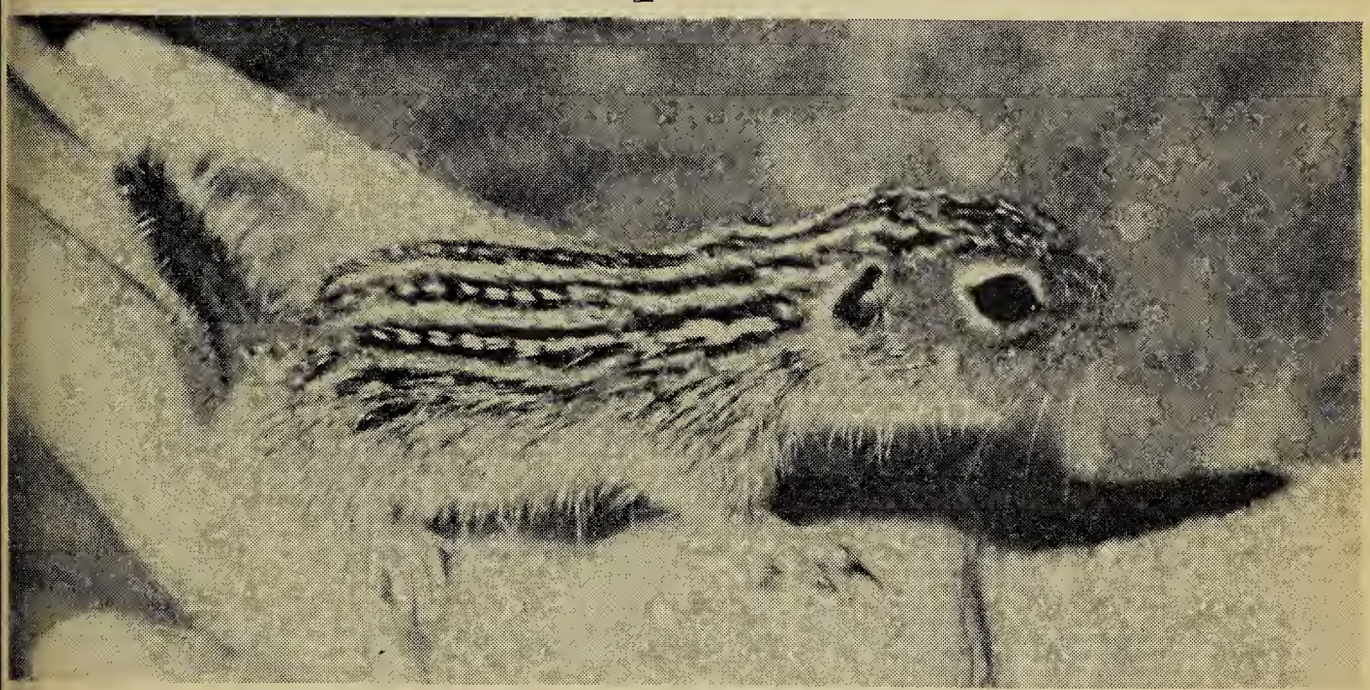


Photo by Doug Gilroy

THIRTEEN-LINED GROUND SQUIRREL

Photo by Doug Gilroy

RICHARDSON'S GROUND SQUIRREL

Report of an Excavation at the Oxbow Dam Site

by **Robert W. Nero** and **Bruce A. McCorquodale,**
Saskatchewan Museum of Natural History

INTRODUCTION

On May 24, 1956, Lt. H. R. Inglis (then of Regina) while pursuing a private quest for archaeological sites in southeastern Saskatchewan came upon a large and recent cut in a river bank which at once caught his attention. Just below the dam on the Souris River near Oxbow, Saskatchewan, spring floods had cut into the east bank below a small terrace and washed away several yards of soil. Bones protruding from the bank at a depth of nine feet and several soil layers containing charcoal indicated an occupation site. Lt. Inglis made some minor tests of the soft layer, most of the site being hard clay, and shortly after brought the results of his tests to the Saskatchewan Museum of Natural History; he then expressed the belief that the Museum should conduct a serious examination of the site. Following the direction of the Museum staff, Lt. Inglis returned to the site and made an additional test, on the 12th and 13th of July. Lt. Inglis' subsequent observations suggested that the site might prove significant and since the terrace was being badly eroded it was decided to send a Museum group down at once for a more extensive test. The object was to secure only enough material to indicate the cultural nature of the site. The authors, assisted by Museum Assistant, Wolfram Niessen, worked at the site for two days, from noon on July 17 to noon on July 19. Although this report is based only on the results of work done by Lt. Inglis and the single test made by the Museum, it seems worthwhile, in view of the scarcity of publications on excavated sites in Saskatchewan, to document these investigations.

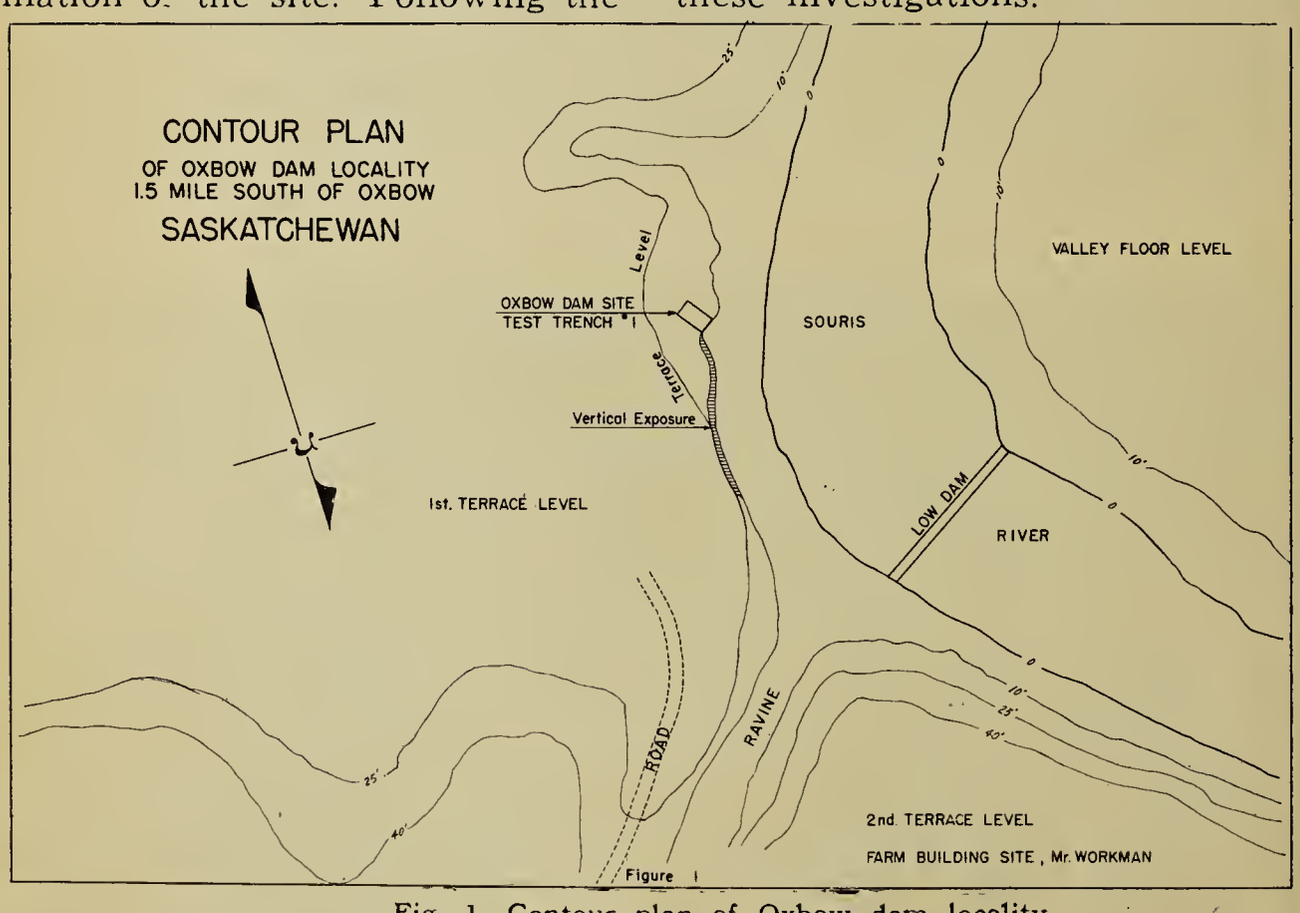


Fig. 1. Contour plan of Oxbow dam locality

Description of Site

The site lies on the east bank of a meander of the Souris River about one and one-half miles south of Oxbow, Saskatchewan, on the property of Mr. J. A. Workman (land description—LSD 15, Sec. 14, Tsp. 3, R2, W 2nd). A low dam traversing the meander, 120 yards upstream (west-

Photo by R. W. Nero

Fig. 2. View of vertical exposure and excavation at the Oxbow Dam Site.

ward), has provided the site with an appropriate name and a well defined location-marker. At the site the eastward trend of the stream changes rather abruptly to a southerly direction (see Figure 1). During flood seasons the volume of water flowing over the low dam is sufficient to cause undercutting on the east bank. On the curve of the meander the east bank rises to the level of the first terrace of the valley proper. Consequent slumping has resulted in creation of an extensive profile of the terrace in a vertical exposure which is over 75 feet in length and 22 feet in total height (see Figure 2).

The profile has revealed the fact that the sediments of the terrace are of alluvial origin. They consist chiefly of layers of partly stratified buff silts of the type commonly deposited by several dark silt zones impregnated with carbon and varying quantities of bone fragments (see Figure 3). The thickest and richest of these dark layers contained an obvious hearth site consisting of fine gray ash. It was from the exposed side of this hearth that Lt. Inglis recovered most of his material and the Museum test pit was put down directly above this point. Cultural material was recovered only from this zone.

The authors wish to acknowledge the kindness of Mr. J. A. Workman in permitting access to the site, and in other considerations. Only through the cooperation of landowners can we continue these studies which help reveal the history of man. We wish also to thank Fred G. Bard, Museum Director, for his interest in supporting this research.

Results Obtained by Inglis

On the 24th of May when Inglis first visited the site the hearth was quite evident and more prominent than later. His sketch of the whole exposure, made on that date at the site, indicates the presence of what appeared to be the partial skeleton of a bison in the central area of the zone containing the hearth. The latter was drawn as a long lozenge-shaped "firebed" by Inglis.

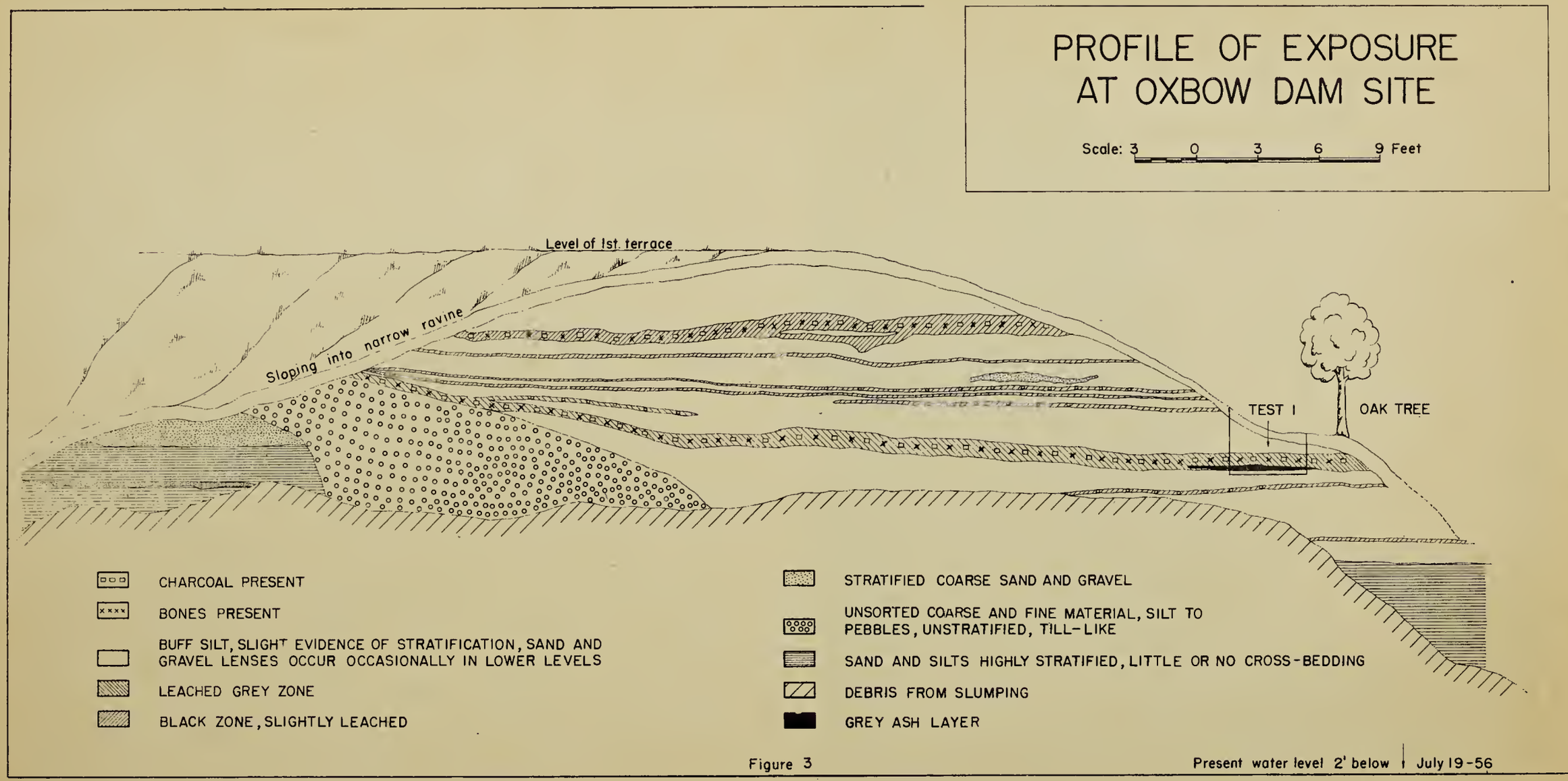


Fig. 3. Profile of exposure at Oxbow Dam Site

On the 12th and 13th of July, Inglis probed horizontally into the soft layer of ash to a depth of from 18 to 24 inches, encountering a "scrap pile?" of bone and stone. His sketches show the position of two large granitic stones (about six inches in diameter) which he correctly designated as anvils, a ". . . top layer thick with small flints—some bone fragments—charcoal and ashes," several large flint "scraps" or flakes and large quantities of bone fragments (see below). One of the anvils was in the hearth but the other was off to one side along with most of the bone material and the large pieces of flint. The anvil in the hearth was surrounded by many small flint flakes, a clear indication that it had been used as an anvil where it was found. Inglis discovered in addition the tip of a projectile point (Fig. 5D), two side-scrapers, a finely retouched flake knife, and two flakes which appear to have been used as knives.

RESULTS OF MUSEUM TEST

Following our arrival at the site on July 17 we made an attempt to test the debris at the base of exposure. A great deal of earth had slumped from the verticle wall and formed a bank sloping steeply into the river. Some two and one-half hours were spent breaking up the hard lumps of clay and screening all available loose dirt in the hopes of recovering material which would otherwise be lost and which might indicate the nature of the site. This effort proved nearly fruitless and impractical owing to the vast amount of sterile earth involved. The remainder of the afternoon was spent screening the earth which had been dug out of the hearth area by Lt. Inglis and some unknown persons. This resulted in the recovery of a projectile point base (Fig. 5,E).

On July 18th we opened a small test pit above the hearth area, partly because this seemed likely to be the most revealing spot and also because owing to the sharp slope of the surface, a minimum amount of earth lay above. The total excavation consisted of a pit four by eight and one-half feet and four feet deep. Profile sketches (see Figure 4) were made throughout the excavation. Initially, all of the earth involved was carefully screened and the screenings washed in the river and closely inspected. Since no cultural articles were recovered from the uppermost layers, these were later sacrificed. All of the earth for six inches above the hearth, as well as that for three inches below, was carefully screened. The hearth layer itself was worked completely with a trowel, nearly all of 26 artifacts and 471 flint flakes which were found being located *in situ* and in direct association with the hearth. About seven feet back from the face of the exposure a small depression, about two feet by one foot and five inches deep was found at the level of the hearth. This was filled with solid ash, some of which extended beyond the depression and overlay the hearth layer. No artifacts were found within this pit.

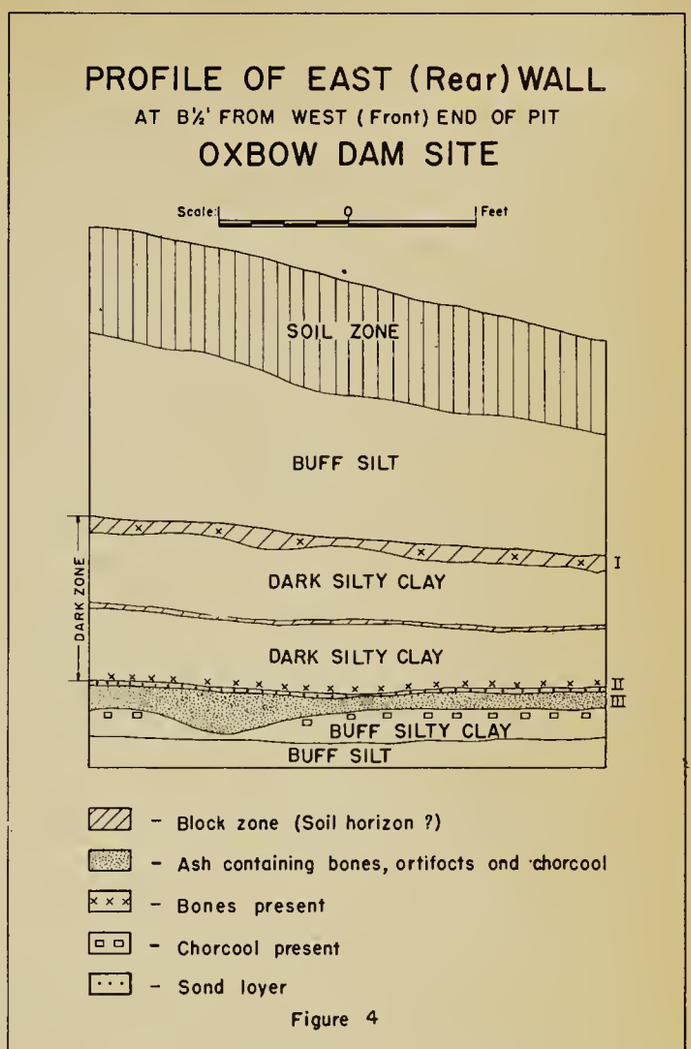


Fig. 4. Profile of east rear wall.

ARTIFACTS

The more significant artifacts which were found are illustrated in Figure 5. The projectile points are all small and side-notched. Two basal fragments of a point which was found by us fitted a piece found by Inglis (Fig. 5,D). (The smallest piece was found among the collected flakes after the figure had been prepared.) This point appears to have fragment-

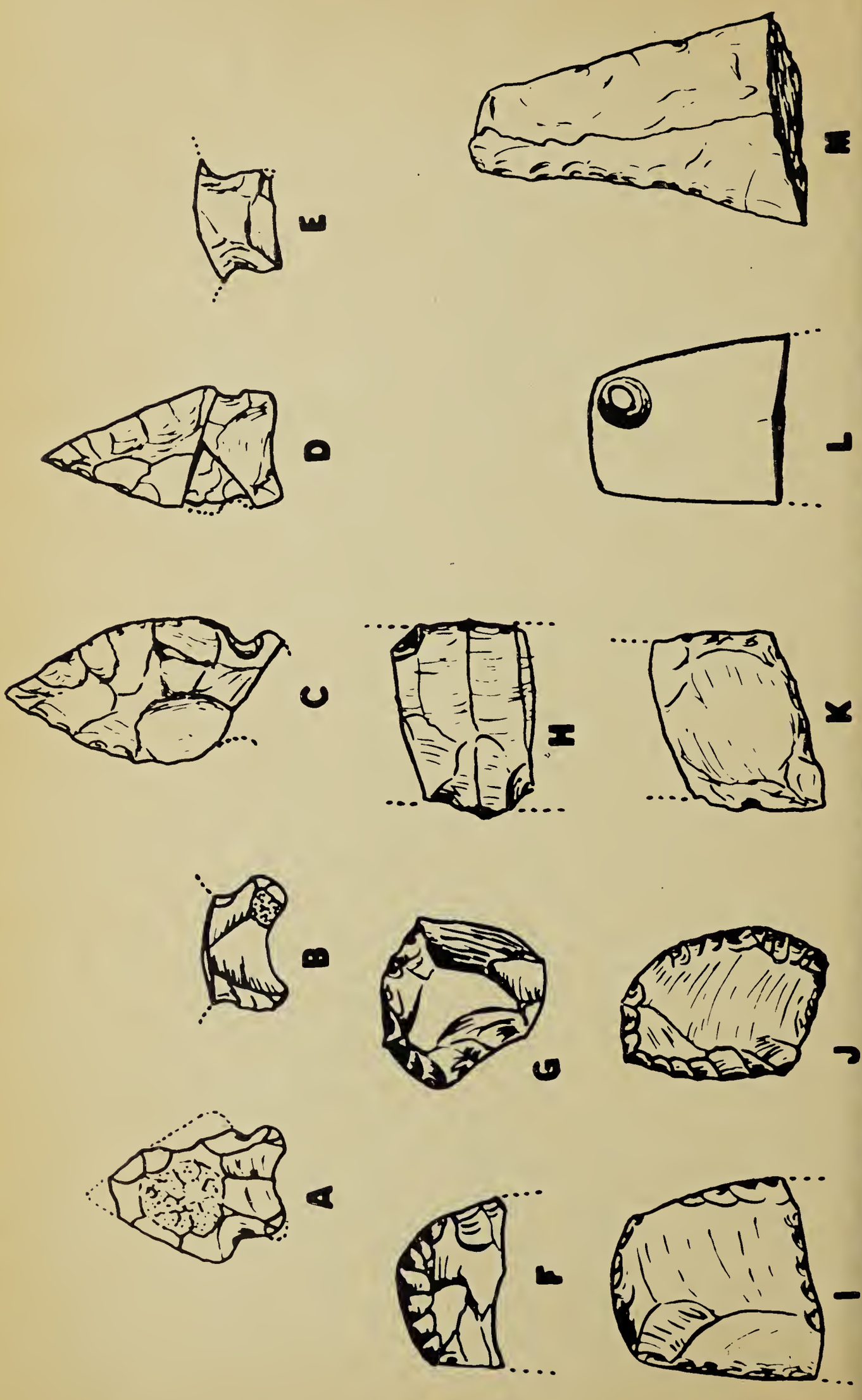


Fig. 5. Artifacts from Oxbow Dam Site (actual size)

ed as a result of being heated by fire. Point A is badly fire-burned chalcedony; B is of fine red chert; C, creamy white chert; D, also badly fire-burned, grey chert; E is of brown chalcedony (Knife River flint). Three of the projectile points show slight signs of grinding in the notch area only (Fig. 5,A,C,D). Measurable and estimated widths between the notches ranged from 12.0 to 13.5 mm. The thickness at the level of the notches ranged from four to six mm. Note the definite thinning of the base by the removal of one or more large flakes. Scrapers F, G, and J are of brown chalcedony; F has a slightly worn distal edge; I is of grey, banded chert —the distal cutting edge has been worn quite smooth, but the edges on both sides of the scraper are sharp. Note the retouching along the edge of the break at the base.

Microscopic examination (10X) of the worn edge of the above scraper revealed fine irregularly-placed striations arranged cross-wise to the edge. These are prominent enough to be detected by scraping with the edge of a fingernail. It would appear that this artifact was used on a tough, irregular surface in a chisel-like pushing movement while held at an angle of about 30 degrees above the horizontal. Features such as worn or ground edges which reveal or suggest utilization may be of archaeological significance. The worn edge described above is unlike most worn edges which we have seen on scraper bits, but at the moment it is difficult to imagine what use this tool may have seen.

Two blade fragments were also found (H,K). H is made of brown chalcedony and shows fine horizontal flaking technique on both sides; K is a mottled pinkish chert fragment of uncertain form. A portion of a shell pendent or gorget (L) has a hole three mm. wide which has been drilled from both sides. In the illustration the inner surface of the shell—the "pearly" side—is shown. The interior of the hole, on the surface illustrated, and the entire reverse surface of the shell bear a thin layer of red pigment. This fragmentary shell artifact is rounded and highly polished on the edges. It has a maximum thickness of six mm. A very small piece of similarly painted shell which was also found may be from the edge of this artifact but it is much thinner. M is a crude flake knife of white chert. The left edge has been retouched from both faces. Additional artifacts which were found but which are not shown include 10 flakes which show retouching and three chert, core-like fragments which appear to be worked. One fragment of heavy long-bone (probably bison) shows signs of wear on one end and may have been used as a tool.

It is interesting to note that although eight of the 22 stone artifacts (36%) which were found are made of chalcedony, only nine out of 460 waste flakes (2%) were chalcedony, 395 being chert (85%). This vast difference in frequency of occurrence suggests that although chalcedony was not readily obtainable it was in great demand. The fact that the nine chips which were found are all small is further evidence and suggests that maximum use was made of this material. This seems strange to us considering the present widespread distribution of chalcedony artifacts on the surface in southern Saskatchewan, and the nearness of the site to chalcedony sources in North Dakota.

Another distinct stone material which was used is a dull, opaque fused shale which is believed to originate from a shale stratum which overlies a prominent coal layer in the "Ravenscrag" formation of the southeastern portion of the province. This shale has been baked to a hard flinty nature in localities where the underlying coal seam has been burned. There is some evidence of quarrying of the fused shale at exposures near Estevan. Fifty-six flakes and two of the artifacts were composed of material of this nature.

DATING AND COMPARISON WITH OTHER SITES

Charcoal samples which were collected directly from the heavy bed of ash in the hearth have been radiocarbon dated by Professor K. J. McCallum, University of Saskatchewan, Chemistry Department. Two different runs were made which yielded dates of 5100±210 years and 5350±250 years. Mean values for these two measurements were calculated to be 5200±130 years. (Personal correspondence, 1958). This is presently the oldest date for a culture-bearing

deposit in Saskatchewan and one of the oldest in the Northern Plains.

There is some resemblance of artifacts from the Oxbow Dam Site to material, which we have examined, from lower levels at the Long Creek Site (Wettlaufer, 1957), especially level No. 8, which has been radiocarbon dated by Professor McCallum at 4650±150 years. Although not strikingly apparent, some similarities were noted in the size, shape, and flaking technique of certain points; worked shell, similarly worked bone tools and other items occurred in both samples. On this basis one would judge the Oxbow Dam Site material to be related and possibly antecedent to Long Creek Site, level No. 8. Support for the possibility of relationships is also suggested by the fact that the two sites are located 40 miles apart in valleys of the same drainage system. A more complete comparison will appear in the final report of the Long Creek Site (Wettlaufer, personal communication).

No relationship to any levels at the Mortlach Site (Wettlaufer, 1955) could be determined and judging by the C-14 dates assigned to Mortlach the Oxbow Dam Site material is from an older time period.

FAUNAL REMAINS

The bone material recovered by Lt. Inglis for the most part consisted of vertebral fragments, phalanges, carpals and teeth of two or more individual bison (*Bison*) including at least one immature individual and one medium-to-large bison which was probably a male. In addition, Inglis collected skeletal parts of a large canid, including the left dentary, portion of the left humerus and fragments of four metapodials. On the basis of size, proportion and other characteristics of the ramus and dentition this canid has been tentatively identified as a medium-sized wolf (*Canis lupus*). We must point out, however, that the distinction would be slight between a true wolf and a domesticated canid derived partly from wolf stock. Therefore, identification of these canid remains must be made with reservations. All of the above-mentioned bone material was collected by Inglis either from the hearth or from the same layer.

All of the bones, whole and fragmentary, that were recovered as a result of the Museum test were catalogued as to level and retained for detailed examination. Three bone producing levels were recognized in the test pit. (See Fig 4.) The uppermost (zone 1) consisted of a thin silty layer, 2 inches thick, lying 1 inches above the hearth. The lower two zones (zones II and III respectively) consisted of a sand layer, inch thick, and the hearth layer immediately underlying the sand layer. The bone fragments contained in zone II were observed to be lying flat in a horizontal plane near the middle of the zone, in some areas in direct contact with the ash. Because there was little evidence of vertical separation between these lower zones, and because both were included in the same black layer, we can reasonably assume that these two levels were coeval, and may be considered as one. However, in keeping with the principles of a factual presentation we have separated them in the following summary.

Zone I yielded two phalanges of medium to small bison plus a phalange and fragment of the radius of a large bison. Additional specimens were a fragment of proximal metatarsal epiphysis and the ectocuneiform (tarsal bone) of an ungulate tentatively identified as an Elk (*Cervus canadensis*).

Zone II produced the right mandible of a Kit Fox (*Vulpes velox*) and a few nondescript fragments of bison phalanges and metacarpals.

Zone III yielded a more extensive array of bison bones and teeth including four fragments of metacarpals and metatarsals, two phalanges, five carpals, four vertebral fragments and one mandible. Comparisons of sizes revealed that at least one large, one medium-to-large and one medium-to-small bison are represented in this collection. In addition to the bison remains a partial skeleton of a frog and a partial left tibia of a canid were recovered. The canid tibia is tentatively identified on the basis of conformable features, sizes and proportions as that of a Coyote (*Canis latrans*). Another specimen is a fragment of a left tibia of a small fox sized carnivore. Innumerable small pieces of bone, burned and unburned

plus a substantial number of fragments of clam shell were recovered from the ash of the hearth.

The species identified from these faunistic remains are indicative of a Plains habitat and Transition Life Zone conditions. Undoubtedly, the general area was not much different from what can be seen there today, although there were probably fewer trees. The Kit Fox record is of considerable importance since so few records of this formerly rather abundant species are available for Saskatchewan (Symons, 1956). This record indicates the occurrence of this prairie species at an early period and extends our knowledge of its former range.

TABLE OF FAUNA (representative of all discovered remains)

Animal represented	No. of individuals	Recovered by	Zone or layer
Bison (large)	2 (?)	Museum	Zones I & III
Bison (Medium to large)	1 (?)	Museum & Inglis	Zones II & III
Bison (Small to medium)	2 (?)	Museum & Inglis	Zones I, II & III
Bison (Immature)	1	Museum	Zone III
Elk (*Cervus canadensis*) (?)	1	Museum	Zone I
Kit Fox (*Vulpes velox*)	1	Museum	Zone II
Wolf (*Canis lupus*) (?)	1	Inglis	Adjacent to Zone III
Coyote (*Canis latrans*) (?)	1	Museum	Zone III
Carnivore (fox-sized)	1	Museum	Zone III
Frog (*Rana*) (?)	1	Museum	Zone III
Clams (*Pelecypods*)	Several	Museum	Zone III

GEOLOGICAL SIGNIFICANCE

In the immediate locality of the site the stream meander follows the north side of a broad valley-flat of the flood plain variety. This valley-flat is approximately one-quarter to one-half mile in width and forms the floor of the Souris River Valley. It is bounded by steep slopes rising to the level of the bed of glacial Lake Souris. At least three terraces are discernible on the valley slopes. The lowest and youngest of these is exposed in the profile associated with the hearth site (see Fig. 2).

The top of this terrace lies approximately 15 feet above the mean floor of the valley proper and on the date of excavation by the Museum was 27.5 feet above the surface of the water in the channel. Upstream (westward) from the site all traces of this terrace have obviously been removed by undercutting of the stream as indicated by the proximal position of its channel to the uprise of the higher second terrace. Eastward (downstream), however, the first terrace was observed to continue for a distance of at least one-half mile as a well-defined valley feature distinguished by its shelf-like structure and continuously flat and and even upper surface. The major part of the sedimentary structure of the terrace has already been described as partly stratified flood plain silts. Under these silts the profile reveals the uppermost part of a series of well-stratified sediments comprising fine sands and gravels which appear to be of fluvial origin (see Fig. 3). These differences in the nature and origin of the sediments imply changes in depositional conditions. Near the left terminus of the exposure an intrusive zone of unsorted till-like material may represent slumping of the adjacent wall of the second terrace.

In considering a possible sequence of events which would explain the topographical and sedimentary features of the lower part of the valley it seems obvious that in early post-Lake Souris time the valley had been down-cut to a level well below the present valley floor. Several features of the valley suggest the presence

of a substantial depth of fill in the original post-glacial drainage channel. Although the nature of the major portion of these buried sediments is unknown it is quite conceivable that the stratified fluvial sediments of the lowest part of the profile (Fig. 3) constitute part of this series. The presence of this well-stratified coarser material indicates that the valley may have contained a stream of much greater magnitude than at present. The implication is that a rainy climate would be necessary to provide such a great volume of stream flow unless the valley was still active as a glacial spillway. The profile reveals that the change from fluvial sediments to flood plain silts is so abrupt as to suggest sudden changes in depositional conditions. Perhaps this has considerable climatological significance. The presence of broad black zones (thick soil profiles), small concentrations of white mineral salts in the silt, leaching of only minor extent and the relative lack of coarse sediments and definite stratification suggest that arid conditions prevailed during the deposition cycle represented by the major portion of the terrace. Fortunately the time of the commencement of this cycle may be approximated owing to the fact that the hearth site, dated at 5200+130 years, lies only five feet above the base of the buff silt zones.

Postulations as to events responsible for the creation of the terrace are more difficult. Obviously, depositional conditions of a minor nature prevailed in the valley during the formation of the buff silt-zone. A subsequent erosional cycle is necessary to explain the reduction of the valley floor to a depth in excess of 15 feet, creating the lowest terrace. Theorizing as to reasons for this change, we must consider such factors as an increase in stream gradient, a drop in base level, a break-through down-stream, a change in sedimentary load of stream water or increase in volume of water carried by the valley. The adaptability of the fourth and fifth factors, with emphasis on the fifth, may be a pertinent aspect in acceptance of any theory. Any increase in volume of water suggests, of course, a climatic change to conditions of relatively higher precipitation.

In order to gain a greater appreciation of the significance of the depositional sequence we must consider the conditions which are prevailing at present. The present-day rate of precipitation is so low in the upper region of the Souris drainage system that the meander channel, in the region of the site, is large enough to contain all but the severest of seasonal floods. Without a substantiating study of the valley sediment we can state only that deposition of the flood plain variety appears to be taking place at a very slow rate. A brief perusal of the climatological studies of other authors (Antevs 1955; etc.) tends to indicate the probability of a direct correlation with the climatic history evidence in more southerly areas of the continent.

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The Role of the Archaeological Society

by **Henry W. Hamilton**, Secretary. Missouri Archaeological Society, Marshall, Mo.

INTRODUCTION

Henry W. Hamilton is a business man who has long been an amateur archaeologist and an active member of the Missouri Archaeological Society. He is secretary of this organization which is recognized as one of the most successful societies of its kind. Mr. Hamilton is also a member of the National Committee for the Recovery of Archaeological Remains. He has kindly consented to write the article especially for the *Blue Jay*, in recognition of our own interest in an archaeological programme at the

Saskatchewan Museum of Natural History. In this regard Mr. Hamilton has written: "I notice that in your area the archaeological work is being done by a museum. Had it been a museum in our case, instead of the university, we would have supported funds for the museum. The important thing is that a society support whatever institution may be present in their area to do the work." Because of the tremendous amount of archaeological work to be done in the province, the Museum needs the active support of all interested individuals and societies. Public support is also needed for the establishment of an effective archaeological programme at the Museum. In view of the recent failure of the Department of Natural Resources to secure funds for an archaeologist and a programme at the Museum, we urge all readers of the *Blue Jay* and their friends, who are interested in promoting an archaeological research programme, to express their views in writing to the Editor.—Ed.

On a gray December day in 1934 about a dozen people from over the the state met in a building on the campus of the University of Missouri at Columbia and organized what was to become the Missouri Archaeological Society. From this meager beginning 24 years ago a society of 1,400 members has grown.

The objectives of the Society, as stated in the constitution and by-laws at that first meeting, were to preserve the remains of the prehistoric people of Missouri, to study these remains scientifically, to publish information about them, to provide both amateur and professional archaeologists with opportunities to discuss their common interests, and to arouse public opinion to an appreciation of our prehistoric past.

Another objective, and a primary one although it was not stated in the written goals of the Society, was to get an archaeologist on the staff at the University of Missouri.

Up to that time the only archaeological work that was being done in the state, chiefly survey, was being correlated and carried out by two university faculty members as a purely spare time activity, since they were in the departments of history and sociology. This work had, however, proved that amateurs and those even slightly interested in archaeology could make valuable contributions to the knowledge of the subject if their work were given purpose.

But all these objectives of the new group took money and that was what the Society didn't have. With the growing support out over the state however, and some interest among the faculty members themselves, the President of the University soon scraped a small amount of funds together. Although these funds did little more than provide food for the season, in 1935 the first University of Missouri field party, consisting of two men, went to the country. They worked on survey and some excavation, and this achievement was met with enthusiasm by the members of the newly organized group.

It was quite evident, however, that one of the primary responsibilities of a state archaeological society was to take the lead in helping to provide funds to carry on the work, so the society did a little further organizing. University appropriations had to be supported before the Legislature in order to get an archaeologist on the staff. An item of Archaeological Research had to be supported and achieved in order to make possible the necessary field work. One objective was accomplished about two years later when an archaeologist was employed and field work started in earnest a little later.

As time went on it became even more apparent that the study of American archaeology is something that cannot wait, for civilization with its construction and business activities is rapidly obliterating all prehistoric evidence. One hundred years from now there probably just won't be any archaeology left. In time this problem was recognized nationally by the creation of the Inter-Agency Archaeological Salvage Program.

So now there was a federal archaeological salvage and research program to support, a program recognized by Congress, and the Missouri Society along with many other societies has given regular and consistent support.

During the year 1957, after 23 years of existence of the Society, the University of Missouri had five field parties at work. Some of these were quite small, some quite large. Some were purely the result of state effort and

some were almost wholly the result of the national Inter-Agency Archaeological Salvage Program.

But public support of archaeological endeavor is not a one-way street; it brings responsibilities upon the individuals who are working in the profession. The professional archaeologist must do for his business what all successful private businesses and most professions do. He must have the willingness, the ability, and the stamina to do the extra work wi the public in order to merit and ke this support. He must know his su ject, as well as sufficient about r lated matters with which he must times deal, so that he can speak a write "English" in his work and not fall into a general jargon of stil ed terms from which it is impossib to get concise meaning. He must g a dollar's worth of effort for ea dollar spent. This is particularly tr since he is spending public funds.

LETTERS

Memorial to Eva S. Mudiman

While looking through my wife's notes I found two articles written on a trip we made to Dawson from Whitehorse on July 1st and 2nd, 1956 . . . I am sending them in as a memorial to Eva S. Mudiman. — Albert W. Mudiman, Whitehorse, Yukon.

EDITOR'S NOTE: We wish we could print the two articles in which Mrs. Mudiman describes the road to Mayo and Dawson, and Dawson City itself. Here is her colourful description of the flowers along the Dawson road: "Here on July 1, the wild flowers are growing profusely in the woods and bordering the highway. Nature has a lovely selection of colour in her summer garden. Violet-blue of Arctic lupin, forget-me-not colour of American bluebells mingle with snowy clusters of Labrador tea; wild roses shading from deep rosy red to the palest pink grow beside the greenish-white northern bedstraw and the common yarrow often takes on a delicate shade of pink or mauve. The campanula spreads its purple bells along the sandy ridges while bright yellow splashes of arnica, golden ragwort and cinquefoil highlight the scene. It is delightful to find the dainty plants of the wild bleeding heart, nodding in the breeze along the road nearing Dawson and the Klondyke river. The magenta of the brilliant vetch and the first blooms of fireweed add a rich final glow to nature's summer tapestry."

Unusual Encounters

I hope some of the readers of t **Blue Jay** will be interested in a f of my experiences with birds and a mals. One evening last summer wh my brother-in-law and I were dri ing along at dusk in the car, we h the frightening experience of sudde ly seeing a large pair of eyes pop in the middle of the road about feet ahead of us. I slammed on t brakes and we got out of the car see whether we had run over so domestic animal. To our surprise found absolutely nothing, not even track in the dust on the road. couldn't have been just our imagin tion because we had both seen t same large pair of eyes gleam at for a second and then disappear. went back to the car and walk around to the front, where we we greeted by a clap, clap, clap. The lodged quite helpless in the grill, w a lovely large Great Horned O clapping his beak at us. We took t owl home and released it the ne morning when we could see that was unhurt.

A year ago last June, I was wor ing up a stubble field for summe fallow when out fluttered a shar tail from beneath the tractor. I i vestigated and found the nest, whi the discer had buried deep in t loose earth. I dug out the eggs, findi that two of the 11 had been smash by one of the discs. The remaini nine I placed in a slight depressi that I made for them in the work soil of the previous round. When came around to the spot again abo fifteen minutes later there w

mother sharp-tail on her nest as comfortable as any biddie I have ever seen. Two weeks later I was back working the field again and saw, not twenty-five yards from where I had rebuilt the nest, the mother bird with nine healthy looking chicks. I felt well rewarded for my time and effort.

One morning in early April when there was still about two feet of crusted snow, I was going for a load of feed in the sleigh with one of my young daughters. She called my attention to a little herd of seventeen deer in a hollow some 200 yards to the south of us. Twelve of the deer took off, flipping their white tails; the other five dropped into the snow which almost covered them. They waited until they thought we were out of sight, then trotted lazily after the others. These five were pregnant does. This action, like the shedding of the male's antlers during the mating season, probably protects the mother doe and young fawn. I wonder whether anyone else has noticed this behaviour.—Fred S. Day, Cupar, Sask.

Meeting of Jack Rabbits

In the September, 1957, issue of the **Blue Jay** the question was asked, "Has anyone seen a meeting of jack rabbits?" I have personally seen such a meeting. There were several hundred rabbits at this gathering at sunset on a winter day—a sight I shall always remember.—Mrs. E. F. Rockel, Lanigan, Sask.

I have seen jack rabbits perform. Last year when I went hunting in a field a little way from the yard, I saw some rabbits hopping about in a funny manner. A little later they ran away. There were about 50 of them.—W. Pawliw, Springside, Sask.

Something to Crow About

Some people look upon the black bear as a predator which should be shot at sight. I kind of like his clownish ways and would hate to see him go the way of the buffalo.

One day last fall I was helping Senko Hulowski pick rocks off summerfallow. Just over the fence was a field of stooked oats belonging to John Romanu.

"Thought you never saw bears in the daytime," says Senko. "What's that over there?"

Behind a stook, a bear maybe two years old, was standing up and helping himself to the oat heads.

"Just you watch while I go over to John's for a rifle. Bend down so he won't see you."

A flock of crows settled on the farthest sheaves: some came closer. I couldn't see Bruin because he had dipped into a hollow. But the crows saw him. The first crows dived with a whoop and a holler. Out came the bear on the gallop; the rest of the crows joined the chase, screaming like banshees.

The poor bear circled twice, his tormentors coming at him from all directions, then dived into a clump of willows at the fence line. The crows argued and argued but the bear stayed put and so they gradually wandered off.

P.S.—Senko shot and missed.—Tom Bird, Foxford, Sask.

Invitations

We have recently become very interested in your magazine and the fine work your Society is doing. At our last meeting it was decided that as a society we would subscribe . . . to your magazine. We hold our meetings on the third Saturday of each month at 8:00 p.m. in the Civil Defence Room, Red Deer Public Library . . . may I on behalf of the Alberta Natural History Society, Red Deer, Alberta, extend a most cordial welcome to any of your members who should be passing through Red Deer to stop and visit with us.—James A. Scoular, Sec. - Treas., Penhold, Alberta.

I would not like to miss an issue of your interestingly informative magazine. Through your inclusion of my name in your June, 1957, number, a correspondence has commenced with another **Blue Jay** reader for which I must again thank you.

An invitation to make Dryden a stop is again sincerely made to any member of S.N.H.S. coming East on our Trans-Canada highway. The area, surrounding the highway from Winnipeg east and particularly between Kenora, Ontario, and Dryden, provides the naturalist with many interesting species. Finds for our checklist last summer were Red-headed Woodpeckers, Golden Plovers (fall and spring migration), and the Virginia Rail (nesting).

This writer participated in the 11th Annual Christmas Bird Census with Cincinnati, Ohio, groups. My delight over the "first" Cardinals, Mockingbirds, Carolina Wrens and Red-bellied Woodpeckers drew fresh attention to these "common" birds.

S.N.H.S. may be interested to know that, for the third fall, several Magpies have been reported around Dryden. The Thunder Bay Field Naturalist Newsletter reports a Magpie (specimen) on January 14, 1958, at the Lakehead.

The writer joins the T.B.F.N. Cl in the Annual Winter Field Trip wi the Minnesota Ornithological Uni at Grand Marais, Minnesota, Feb. 2 This is a fine meeting of fellow co servationists and is well attended Canadians and Americans.

Thank you for this opportunity write a bit about this area where Ea meets West plant-wise as well as bird species.—Mrs. Laura A. How Dryden, Ontario.

The Blue Jay Bookshelf

ANIMAL LEGENDS

By *Maurice Burton*

New York; Coward-McCann, 1957.

The keynote of this book is set by the author in the second sentence of the Preface: ". . . I have found interest in the subject sufficiently widespread elsewhere to believe that the open-minded layman might welcome an exposition of some of the less incredible legends, those, that is, which science rejects without being able to reason away." And so he explores the arguments for and against accepting as credible a wide range of animal behaviour reported, often by laymen, over a long period of time, beginning with the hibernation of birds and ending with the legend of the Phoenix, in every case analysing the evidence, and drawing conclusions wherever he can. He deals with such well-known animal legends as that of the Loch Ness Monster, the Sea Serpent and the Abominable Snowman. He also discusses all kinds of curious animal behaviour that is difficult to explain, although it cannot be called "legendary" in the usual sense of the word.

One example used by Burton of curious animal behaviour is the phenomenon called bird anting. Birds of many species have been observed to pick up ants (or sometimes other materials) with their beaks and to place them on their plumage, assuming a strained posture as they do Bird anting has been investigated many ornithologists and Burton r fers to H. Roy Ivor, a Canadian, the man who, more than anyone el has made a close study of the matt Since he wrote those lines a signi cant report on anting by Lovie Whitaker has appeared in the Wils Bulletin (Vol. 69, No. 3, Sept., 195 Miss Whitaker, after dealing exhau tively with the subject, concludes li Burton that the cause of anting birds is unknown, but she offers suggestion that the materials used birds in anting (ants, beetles, smol etc.), all being pungent or acrid, ha a soothing effect when the bird suffering irritation, perhaps caus by microscopic skin parasites. Th certainly bears further investigati And now back to our book—

Another interesting observation animal behaviour concerns snak jumping. There appears to be relia evidence from many countries snakes of divers species jumpi Now, as there are plenty of snakes Saskatchewan, here is a phase snake behaviour that could well examined by some person who has methodical turn of mind, lots patience, and a snake. Burton frigh ened a snake into jumping a dit and if this could be done as a co trolled experiment (with witnesses a movie camera there) one m legend might be accepted as scienti fact.

To my mind, the heart and soul the book is to be found in a pa graph on page 131: "There is wit out doubt a growing gulf today b

tween what may be most conveniently called the layman and the professional in natural-history matters. There are several reasons for this. One, which concerns us here, arises from the knowledge on the part of those who know the subject that it is so easy to fall into error in the interpretation of the actions of living organisms, and especially of the higher animals. . . . There is one specter that haunts them more than any other, the specter of error, because error has been so frequent in the past." Burton deals with this thought in a rewarding manner.

The book is valuable and well worth reading because it emphasizes throughout our tremendous lack of knowledge of the reasons for such animal behaviour. So much significant and unusual behaviour is accidentally witnessed by the casual passer-by which is either straightaway forgotten, imperfectly recalled later, or garbled in the telling, that Science properly treats the unsupported account with reserve. Anyone who witnesses unusual antics ought to note carefully at the time all the particulars and submit the observation to an authority such as our Museum, for evaluation. We actually know so little about these things that an observer who regularly sends in his records can hardly fail to make a contribution to the sum total of human knowledge.—Frank Brazier, Regina.

BRYOPHYTES OF SASKATCHEWAN. *By H. S. Conard.* The Bryologist, Vol. 60, No. 4, pp. December, 1957.

This paper summarizes the work of the author and of several other persons including myself who for several years have been collecting and identifying Saskatchewan mosses and liverworts. As far as we know, this is the first attempt at serious study of moss in our province. The aim of this paper is to give a preliminary report of the occurrence and distribution of moss in our area. A total of 140 taxa are reported. This includes 131 species of moss and nine species of liverwort.

As the moss collecting has been confined mostly to the northern section of the province where detailed mapping and naming of geographic features is not complete, it has been necessary to report localities by latitude and longitude. This is very cumberson, so the map of Saskatchewan was divided into 44 blocks two degrees wide and one degree high and each block was assigned an arbitrary number. Mosses have been collected in only 31 of the 44 blocks. The lack of data for some blocks indicates that there is need for more work in this field. Active collecting is being continued.

A small number of reprints of this article are available from both the Editor of the *Blue Jay* and myself.—M. A. Welsh, Prince Albert.

S.N.H.S. Executive Meeting at Davidson, March 22, 1958

by **Elizabeth Cruickshank**, Recording Secretary, S.N.H.S.

Crowd a group of naturalists into a hot hotel room where one bed had to be piled on top of another to make more room, and what have you? The best, merriest and most interesting executive meeting the S.N.H.S. ever held. Good show!

And something special—Jack Livingston, Toronto, Executive Director of the Audubon Society of Canada, arrived with Fred Bard. He had been in Regina to attend the meeting on hawks and owls with A. F. Oeming. The Saskatoon members in charge of the annual meeting programme had hoped—just hoped with fingers crossed—that they might persuade Mr. Livingston to come from Toronto to be the main speaker at the October gathering. Imagine their surprise at having him walk into the executive meeting at which plans were to be made for the annual.

Davidson was chosen as sort of a half-way house for society members from the north and south. From Saskatoon came Frank Roy, president, Mrs. Gerrard, Helen Mann, Steve Mann and Dr. Bremner; from Regina, Marj Ledingham, Betty Cruickshank, Marg Belcher, Fred Bard, Elmer Fox, Gordon Stewart, Frank Brazier, Bob Nero, George Ledingham; from Bladworth, Lawrence Beckie.

As we always go bird watching on Saturday afternoon, and as this

was a Saturday afternoon, we felt the road to Davidson, even though time did not permit lingering along the way, might be worth scrutinizing,

Every collection of buildings that we passed had its company of starlings. As we talked of this at the meeting, Mr. Mann told us about a rancher who had never seen a starling. He thought a black meadowlark had come to nest on his farm. Their shape is similar, and with albino and melanistic specimens of other birds being found, why not an odd meadowlark?

Near Girvin we enjoyed a most thrilling sight—the largest congregation of horned larks we had ever seen. They seemed to cover a stubble field. We were sorry to see a dead horned owl on the shoulder of the road.

An organization like the S.N.H.S. has members all over the province but it is difficult for them to get together. So the Davidson meeting was important because it presented an unusual opportunity for an exchange of ideas. Our unique society will become stronger when all its members conscientiously contribute their ideas and give encouragement to those who are trying to make the *Blue Jay* the most worthwhile and vital nature publication in Western Canada. Mr. Livingston said even now he thought the magazine was "terrific!"

Because there are so many angles to natural history and conservation we have a big job to do. One phase of conservation where we can help to promote real understanding is the position of predators in nature's scheme. To protect the predators, we should be reaching young people who, like their elders, often practise shooting at anything that moves. Senseless slaughter results and many of the farmer's best allies in the bird and animal world are destroyed. Mr. Livingston encouraged the society in its stand regarding predators, and we hope to have further support from him and the Audubon Society when the question of protection is raised at the annual meeting.

A suggestion from Dr. Houston was passed on to the executive regarding another conservation project. He urged a rehabilitation scheme for the wood duck, and Mr. Bard pledged his help in working out promotio plans.

We are sorry the Prince Albe members were unable to get t Davidson, but they sent well worke out plans for the June meeting whic they hope will bring a large numbe of members to Emma Lake.

The fact that the A.O.U. conve tion will be held in Regina in Augus 1959, has brought about a great up surge of interest in birds. We ar surely in a favoured position wit the thrilling prospect of meeting an listening to people who heretofor have been just authors' names fro our most read books on the librar shelves. We are sure there will b rewarding associations both for thos whose approach to the subject birds is scientific and for those whos approach, like ours, is just joyful.

How gratifying our Davidson meet ing was! Here were doctors (M.D. and Ph.D.'s), farmers, a nurs school teachers, museum director business men and housewives all co operating in a common worthy caus How satisfied we felt on the lon drive home as we discussed plan new approaches to old problems an the pleasant fellowship we had er joyed as members of a worthwhi organization. We wished simila meetings might be held often.

Garden River Natural History Society Formed

On February 11, 1958, a meetin was held at Meath Park School i order to organize a natural histo society. Mr. Lensen, Conservatio Officer for Candle Lake, propose that the society be called the Garde River Natural History Society, an it was decided to adopt the constitu tion of the Prince Albert Natur History Society with several amend ments. The membership fee is $1.0 per person, or $2.00 for a famil This fee includes a year's subscriptio to the **Blue Jay.** Fourteen membe enrolled.

The officers of the new societ include: President — Frank Suda Vice-President — Ray Childs; Se retary — James Hrenyk.

It is encouraging to have a ne natural history group in the provinc and we hope to meet its membe at Emma Lake in June.

The Saskatchewan Natural History Society

Officers 1957 to October 1958

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Past President	Frank Brazier, 2657 Cameron Street, Regina
President	Frank Roy, 120 Maple St., Saskatoon
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Corresponding Secretary	Margaret Belcher, Regina College, Regina
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2-year term: Stuart Francis, Torch River; Mrs. J. Hubbard, Grenfell; E. Brooman, Prince Albert; W. Anaka, Spirit Lake; Doug Gilroy, R.R. 2, Regina.

1-year term: Dr. S. Houston, Yorkton; S. A. Mann, Skull Creek; Maurice Street, Nipawin; Mrs. Rose McLaughlin, Indian Head; R. Willems, Lockwood.

Presidents of Local Branches:

G. W. Stewart, Regina; Phil Pawluck, Yorkton; Ross Homer, Prince Albert; Frank Roy, Saskatoon; F. Baines, Saltcoats; Carl Ellis, Moose Jaw; Frank Sudal, Garden River.

Chairmen of Committees:

Conservation, F. G. Bard; Constitution, E. L. Fox; Magazine, Margaret Belcher; Membership, F. Brazier; Programme, Mrs. J. Gerrard and Dr. R. M. Bremner; Publicity, R. W. Fyfe; and Publications, Dr. S. Houston.

NOTICE TO MEMBERS

The **BLUE JAY** hopes to continue in 1958 its programme of expansion. In addition to printing the magazine, we are beginning a series of special publications, the first of which will be Harvey Beck's bulletin on the Mammals of Saskatchewan. In order to support these new projects, as well as to publish a good magazine, we need an enlarged membership. Help us get new members.

MEMBERSHIPS

All persons interested in any aspect of nature are invited to join the Saskatchewan Natural History Society. Membership dues per calendar year are: Sustaining, $5.00; Regular, $1.00. The **BLUE JAY** is sent without charge to all members not in arrears for dues. Send your membership to the treasurer, Elmer L. Fox, 1053 Gladmer Park, Regina, Sask., Canada.

REPRINTS

Reprints from articles printed in the **BLUE JAY** may be ordered from the Editor. They will be printed for you at cost.

WANTED

The following back copies of the **BLUE JAY** have been requested: June, 1951; September, 1951; December, 1951 and September, 1953. If you can spare any of these numbers, please write to the Editor, 2335 Athol St., Regina.

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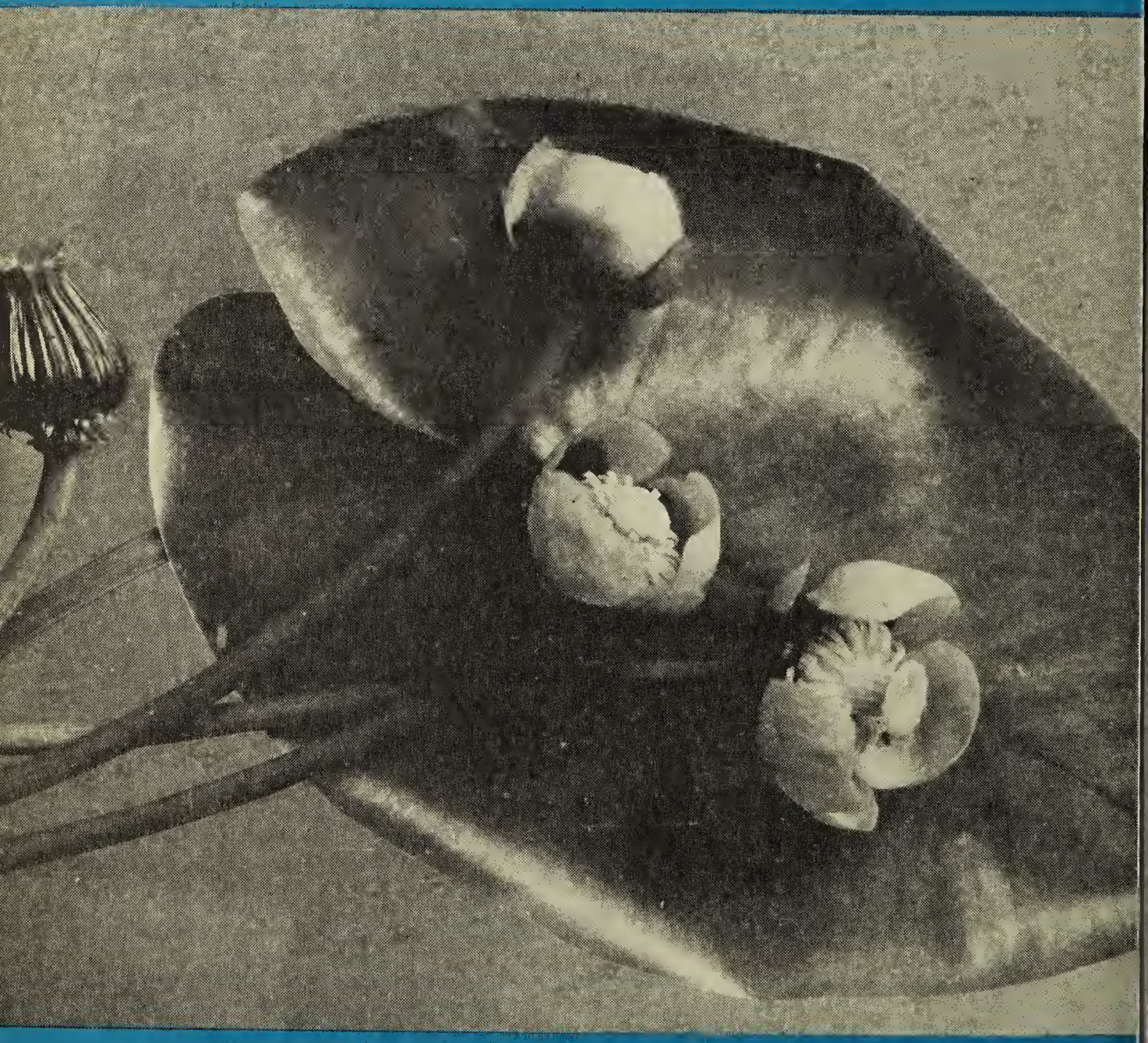

YELLOW POND LILY

Photo by W. C. McCal

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